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VISIBILITY TOWARD THE GROUND FROM SELECTED TACTICAL AIRCRAFT

KENNETH W. KENNEDY

DON McKECHNIE

OCTOBER 1970

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AEROSPACE MEDICAL RESEARCH LABORATORY
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13. ABSTRACT

A method for comparing visibility from the cockpits of selected aircraft is presented. The ground areas visible to each eye from the pilot/copilot positions in the level aircraft attitude are given for the A-1E pilot, A-1E copilot, A-7A, A-26A pilot, A-26A copilot, C-123B copilot, F-5A, F-5B front, F-5B rear, F-105D, F-111A pilot, O-1A pilot, O-2 pilot, OV-10A pilot, and RF-4C front. Ground areas are also presented for the RF-4C front at selected attitudes of pitch and roll. The ground area visible within sectors of the terrain, defined in terms of ground radii, slant ranges, and positions relative to the aircraft, is expressed as a percent of the total area within the sector. These percentages are valid for any altitude since ground radii and slant ranges are expressed as multiples of altitude.

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FOREWORD

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Illustrations were prepared by M. J. Kennedy, Yellow Springs, Ohio.

This technical report has been reviewed and is approved.

C. H. KRATOCHVIL, COLONEL, USAF, MC
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SECTION I

INTRODUCTION AND METHOD

This report describes a method for evaluating and comparing aircraft in terms of the amount of terrain visible from the cockpit and demonstrates use of the method on several aircraft.¹ The method consists of calculating from photographs, the areas of selected sectors of the earth's surface that are visible from the eye position of the pilot. These areas, expressed as percentages of the total area of the sectors being considered, may be regarded as indices of visibility from the cockpit.

To obtain the basic data we used a Binocular Cockpit Visibility Camera (see fig. 1) developed between 1948 and 1951, primarily through the efforts of Mr. T. M. Edwards at the Civil Aeronautics Administration Technical Development and Evaluation Center, Indianapolis, Indiana. It is now being used by the National Aviation Facilities Center (NAFEC), Atlantic City, New Jersey.

The camera produces cockpit visibility photographs with two superimposed images representing the visual images for each eye. Its two lenses are separated by 2.5 inches, an approximation of the average interpupillary distance. When in use, the camera is located at the cockpit eye position and the photographs thus obtained are a panorama of what the pilot can see when he rotates his head from side to side at the cockpit eye position. A short description of the camera and the method of operation are given in Appendix I.

Typical cockpit visibility photographs are illustrated in figure 2. Such photographs record the scene as viewed from a specific, standard eye position. The photographs, and the data derived from them cannot be considered measures of *total* visibility from the cockpit. Obviously, a pilot is free to move his head and torso within limits and, thus, alter his field of view. It is assumed, however, that head and torso movements are essentially the same in equivalent aircraft; and, therefore, the total field of view resulting from such movement is a function of, and dependent upon, the extent of vision from the design eye position.

In our evaluations we assumed that in side-by-side cockpits, the head and torso of each crew-member partially blocks the view of the other. Therefore, vision from such cockpits toward the ground out opposite sides of the canopy or cabin is not included in our evaluations.

The nature of vision toward the ground is modified by changes in orientation of the aircraft. As the nose is pitched down, more terrain immediately in front of the aircraft becomes visible. It is possible, however, by such a maneuver, to introduce additional obstacles to vision toward the ground that, in level flight, are above the horizon. With the nose pitched up, visibility toward the terrain in front of the aircraft is obviously reduced and often completely blocked. Ground visibility out the side of the cockpit is drastically altered during roll. In a sharp left turn, for instance, the view of the ground out the right side is often completely lost. With yaw, the pattern of obstructions to visibility is not changed, even though the longitudinal axis of the aircraft diverges from the direction of travel.

To our knowledge, most evaluations of vision from the cockpit have not been carried beyond examining photographs or drawings similar to those in figure 2. In fact, the military standard dealing with vision from the cockpit¹ is presented in essentially the same manner as these photographs. Such photographs are very useful when examining vision in three-dimensional space, but not

¹See reference 1 for a short account of previous attempts to portray vision from the cockpit.

¹MIL-STD-850, "Aircrew Station Vision Requirements for Military Aircraft," 30 August 1965, and the superseding revision, MIL-STD-850A, same title, 8 June 1967. Since nearly all of even the newest aircraft in the 1969 USAF inventory were already off the drawing board in 1965, MIL-STD-850 and 850A have had little application.

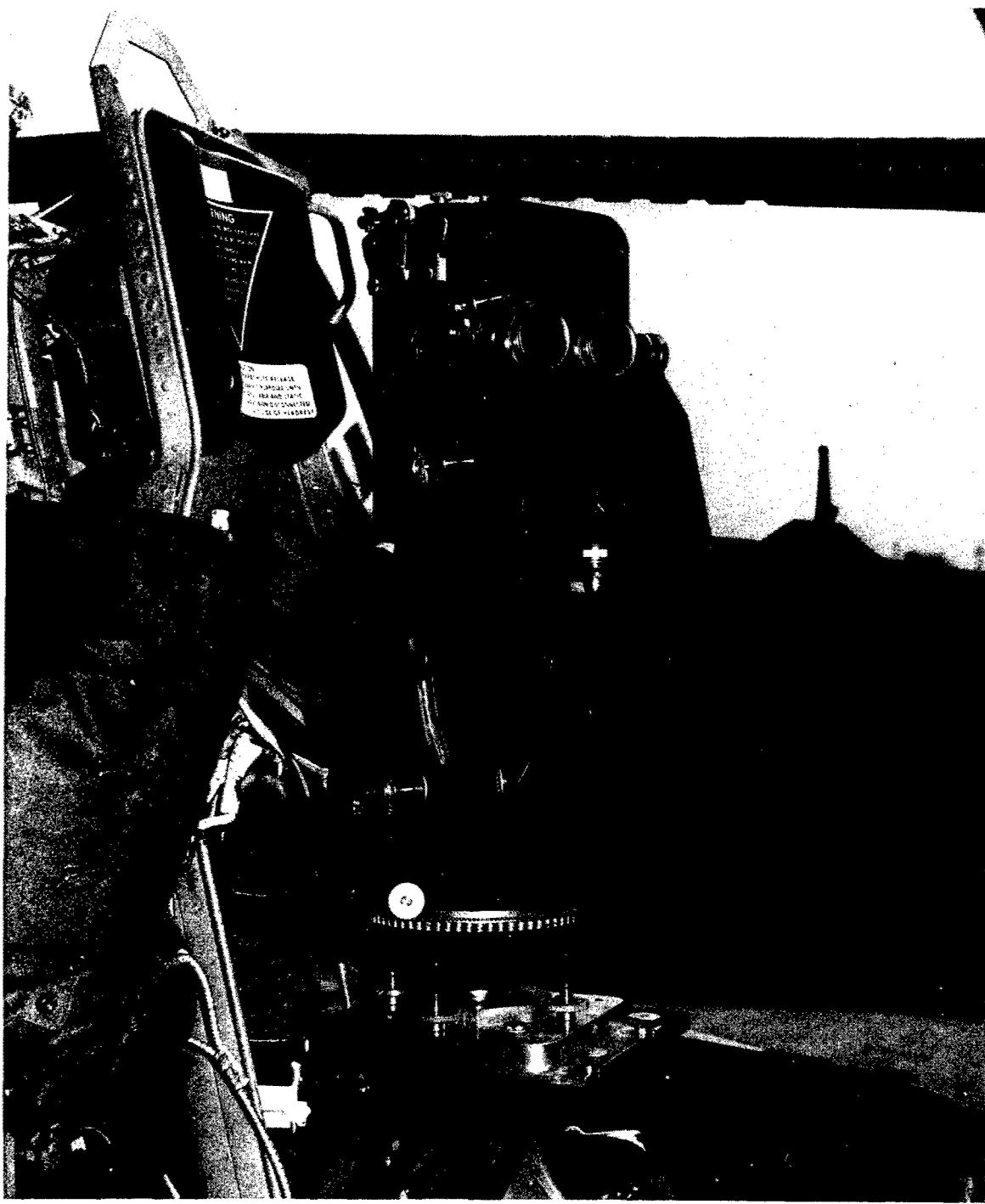


Figure 1. BINOCULAR COCKPIT VISIBILITY CAMERA.

The camera is located at the cockpit eye position and the photographs obtained show a panorama of what the pilot can see when he rotates his head from side to side with the aircraft level. (Photograph courtesy of North American Aviation Division, Columbus, Ohio.

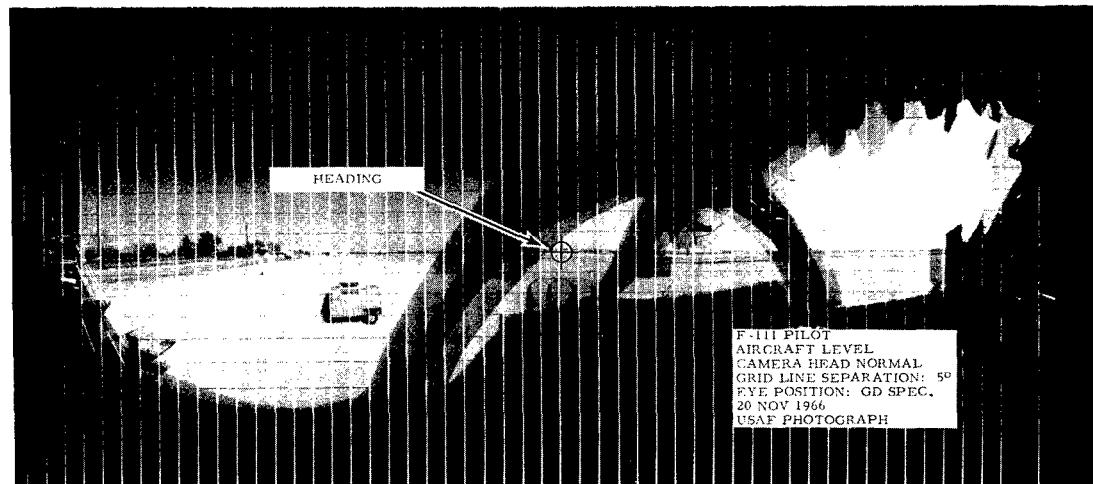
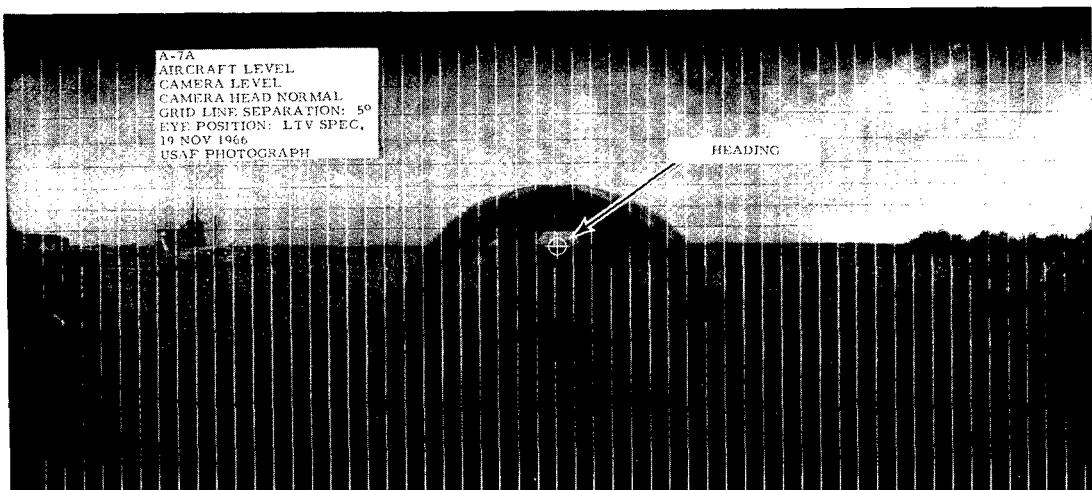


Figure 2. TYPICAL BINOCULAR COCKPIT VISIBILITY PHOTOGRAPHS.

The upper photograph was taken from a single cockpit (A-7A); the lower from a side-by-side cockpit (F-111). The grid-lines were produced as the film was exposed, and represent 5° intervals of horizontal and vertical angular displacement from a vector originating at the cockpit eye position and extending horizontally in the direction of aircraft travel. Before the photographs are made, the aircraft and camera are levelled. In our evaluations we assumed that, in side-by-side cockpits, the head and torso of each crewmember effectively blocks the view out of the canopy on his respective side for the other crewmember. Therefore, the pilot does not have useful vision out of the copilot's side window (indicated in the lower photograph by an "X").

when precisely evaluating visibility toward the surface of the earth. Indeed, they are not intended to serve this purpose. They are, however, quite adequate as *sources* of basic information for such an evaluation.

When examining a simple cockpit visibility photograph, the viewer obtains only a subjective impression of the overall quality and extent of vision toward the ground. Though the earth can be seen, relative sizes and positions of images are distorted because of their different distances from the vantage point and because of their different angular positions relative to the vantage point in the aircraft and to each other. Using such photographs, it is difficult, if not impossible, to estimate accurately ground distances and slant ranges (the lengths of the lines-of-sight) to objects on the ground.

When looking at the ground, the observer is for all practical purposes, looking at a flat plane and at objects on that plane. To show the true shapes of the areas on the ground that can be seen from the cockpit requires that the surface of the earth be depicted much as in an engineering drawing. In such a drawing, the observer does not view the earth from a single point, as in a photograph, but from an infinite number of points in a plane above and parallel to it. In the drawing, perspective is eliminated and the features on earth's surface can be illustrated to a common scale. Spatial relations in the two dimensions of the drawing are true. By projecting the shapes of the visual obstructions onto the ground we can measure the areas of the terrain not obscured. We have called such drawings, "ground visibility plots."

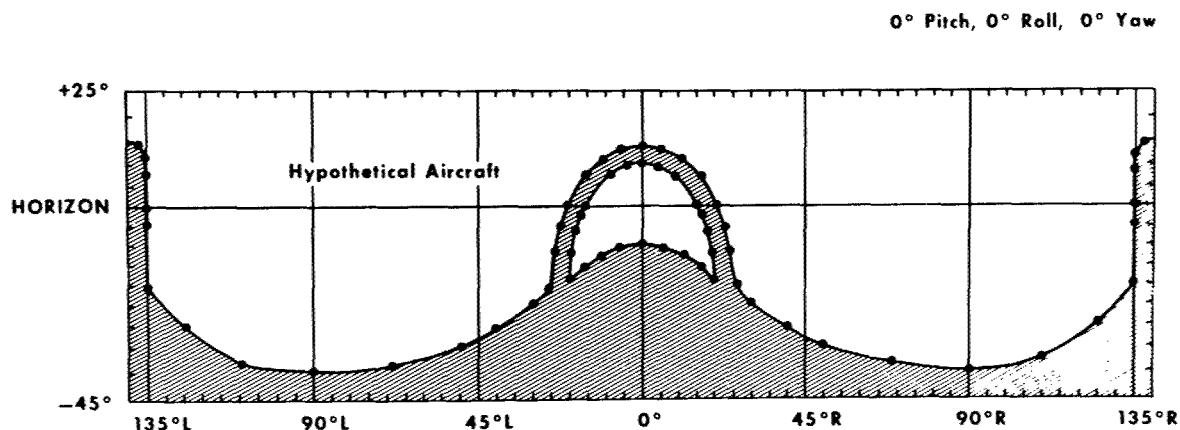


Figure 3. COCKPIT VISIBILITY RECORD (MONOCULAR)—MIL-STD-850A SINGLE OR TANDEM COCKPIT.

Dots have been placed at points along the outlines of obstructions to vision from the cockpit. Their placement and number are typical of those considered necessary to describe adequately visual obstructions of a simple shape in terms of angular coordinates.

To obtain the ground visibility plots, the angular coordinates (depression angles and horizontal angles¹) of the points on the cockpit visibility photographs that outline the obstacles to vision from the cockpit eye-positions are measured and projected to the ground. The actual number of sets of coordinates necessary to describe adequately the outlines of the obstructions depends upon the complexity of their shapes. Figure 3 illustrates the location and number of points typical of those necessary to describe visual obstructions in terms of angular coordinates. This illustration depicts a hypothetical cockpit that conforms to the quality of external vision specified in MIL-STD 850A for single and tandem fighter cockpits. In contrast to the cockpit visibility photographs in figure 2, the line-drawing in figure 3 is a monocular presentation. It represents visibility with one eye from the cockpit eye-position. The purposes of including this monocular view are to gain information regarding the nature of the military standard and to preserve simplicity in the following discussion. Such line-drawings, whether monocular or binocular, are here referred to as "cockpit visibility records."

In figure 3, each point on the perimeter of the canopy represents a vector. All vectors originate at the cockpit eye position. The angular coordinates for each are measured and those extending toward the ground are used to derive a ground visibility plot. The locations, relative to ground O, where the vectors strike the ground, are calculated using simple trigonometric procedures.² When all such points are located, it is possible to depict the shapes of the areas on the surface of the earth that are visible from the cockpit eye position. This procedure is explained graphically in figure 4.

Figure 5 contains the cockpit visibility record and ground visibility plots for a hypothetical single seat or tandem cockpit aircraft meeting visibility requirements established in MIL-STD-850A. Vector A in the cockpit visibility record strikes the ground at point A in the ground visibility plot, vector B strikes B, etc. Since we are concerned only with vision toward the ground and since the aircraft is in a level attitude, we need not concern ourselves with vectors such as J, which are not directed toward the ground. However, when considering the effects of a pitch-down attitude or a roll on vision from the cockpit, such vectors may be directed toward the ground. Under such conditions, they are applicable to our evaluation.

One ground visibility plot has been drawn so that a ground radius (and other ground distances) equal to two spaces on the scale is equal to three times the altitude of the aircraft. If the altitude of the aircraft is 100 feet, this ground distance equals 300 feet; at an altitude of 500 feet, this ground distance is 1500 feet. The radius of the entire land surface depicted in this plot is 18 times the altitude of the aircraft. The ground visibility plots for many aircraft are sufficiently complex in detail close to ground O that it is desirable to enlarge the central section. Such an enlargement is also illustrated in figure 4. The scale of the latter plot indicates that four spaces are equal to the altitude of the aircraft. The radius of the terrain portrayed in this plot is three times the altitude of the aircraft.

When evaluating vision from aircraft, it is important to know slant ranges to points on the ground. To permit estimation of these distances, dashed circles have been included in the visibility ground plots. These circles are of such a radius that the slant range from the cockpit eye position to any point along their perimeter is equal to the indicated multiple of altitude.¹ Therefore, the slant range to the innermost dashed circle is 1.5 times the altitude of the aircraft; to the next circle, 2

¹Depression angle is defined as the downward angular divergence of a vector from the horizon. The distance from the cockpit eye-position along any vector to the ground is here referred to as "slant range." Horizontal angle is the horizontal angular displacement of a vector, either Left or Right from the longitudinal axis of the aircraft. If there is no yaw, the longitudinal axis of the aircraft coincides with the direction of travel.

²Cotangent A (depression angle) X altitude of aircraft (expressed as unity)=ground distance (expressed as a multiple of altitude) from ground O along the horizontal angle.

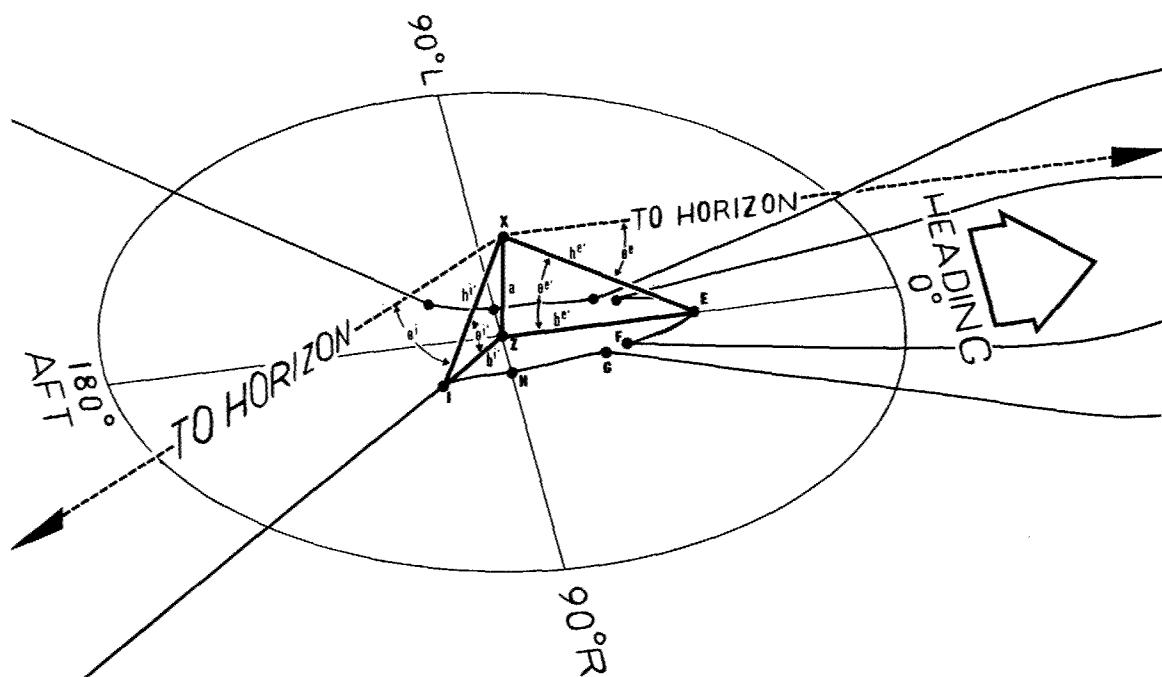
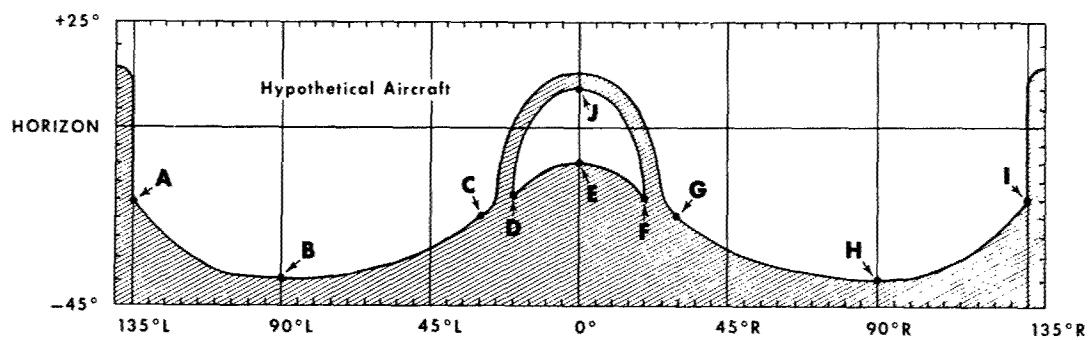
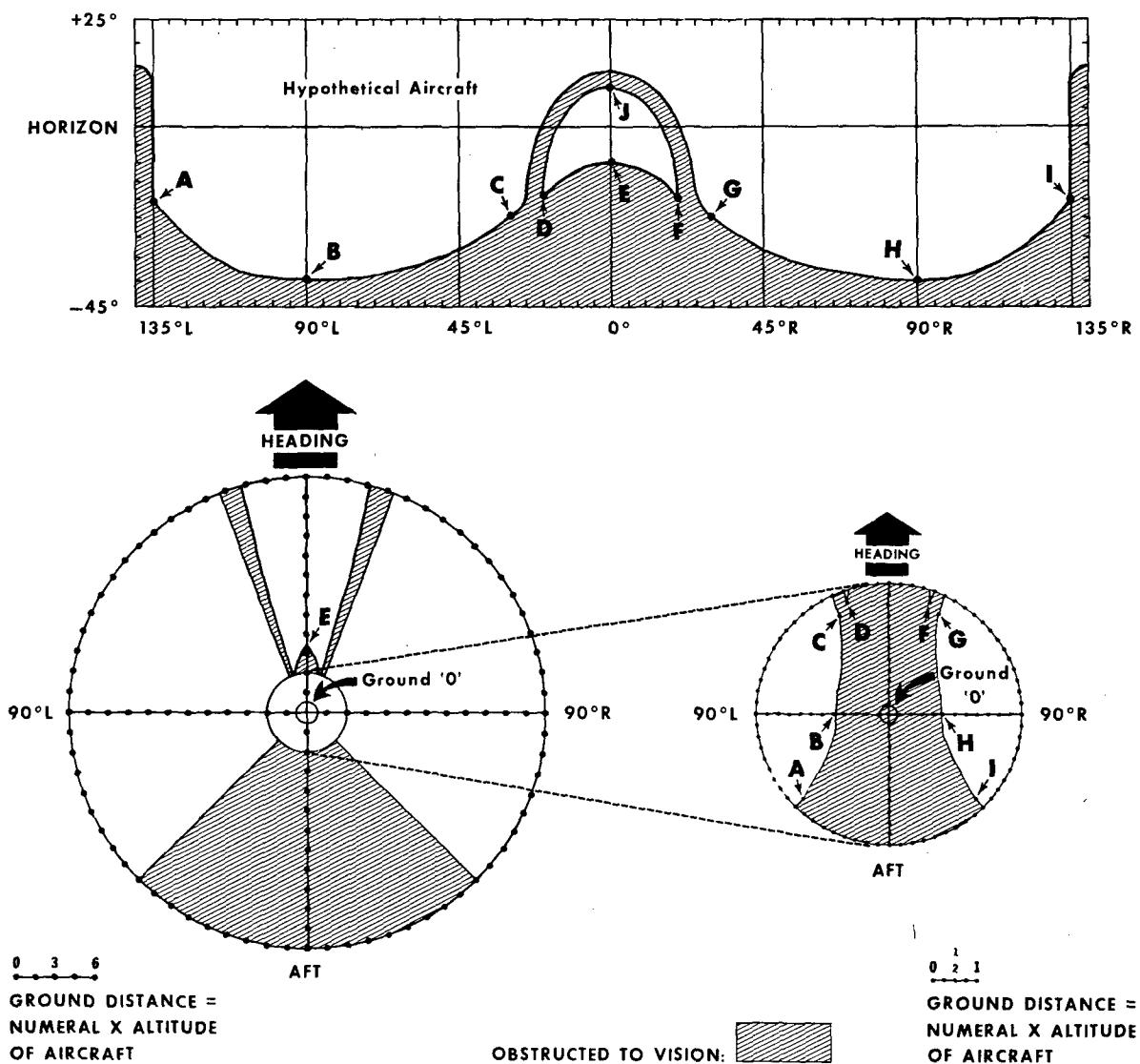


Figure 4. DIAGRAMMATIC ILLUSTRATION OF RELATIONSHIPS BETWEEN THE COCKPIT VISIBILITY RECORD (PHOTOGRAPH) AND THE GROUND VISIBILITY PLOT.

The upper illustration represents a monocular cockpit visibility record for a hypothetical single or tandem cockpit meeting the vision requirements of MIL-STD-850A. The lower illustration is an oblique schematic representation of the ground visibility plot for the same aircraft. In the ground visibility plot, the aircraft is located at X and ground O is located at Z. The altitude of the aircraft is a. Depression angles of the vectors E and I in the cockpit visibility record are denoted in the lower illustration as θ_E and θ_I . Since all vectors to the horizon are essentially parallel to the ground (except at high altitudes), $\theta_E, \theta_I, \dots$, are equal to $\theta_{E'}, \theta_{I'}, \dots$. Solving for $b_{E'}, b_{I'}, \dots$, the ground radii from ground O to the points where vectors E, I, \dots , strike the ground, is accomplished by contangent $\theta_X a = b$. In the schematic ground visibility plot, only the points where vectors E, F, G, H, and I, strike the ground, are illustrated. To illustrate points A, B, C, and D would unnecessarily clutter the drawing. Vector J, of course, is not illustrated, since it is above the horizon.

0° Pitch, 0° Roll, 0° Yaw



**Figure 5. COCKPIT VISIBILITY RECORD (MONOCULAR) AND GROUND VISIBILITY PLOTS—
MIL-STD-850A SINGLE OR TANDEM COCKPIT.**

Vector A in the record corresponds to point A in the plot, vector B to point B, etc. Since we are concerned only with vision toward the ground, vectors such as J come into consideration only when examining the effects of pitch and roll. Ground distances may be estimated by using the scale below the plots.

times the altitude, and so forth. It follows, then, that the entire terrain inside any circle is within a Slant Range equal to that multiple times altitude. Figure 6 is a graphic explanation of the relationship between Slant Range and altitude.

It is interesting and useful to know the relationships between ground radii, slant ranges, and depression angles. Table 1 illustrates these relationships and makes it possible to determine any two of these three variables if one is known.

1 h (slant range expressed as a selected multiple of the altitude of the aircraft) \div a (altitude of aircraft, expressed as unit) = cosecant A (depression angle). Then, cotangent A (depression angle) \times a (altitude of aircraft, expressed as unity) = b (ground distance from ground O, expressed as a multiple of altitude). b , then, equals the radius of the circle which includes all land area within a slant range equal to the selected multiple of altitude. Depression angles, ground radii, and slant ranges may be estimated using table 1.

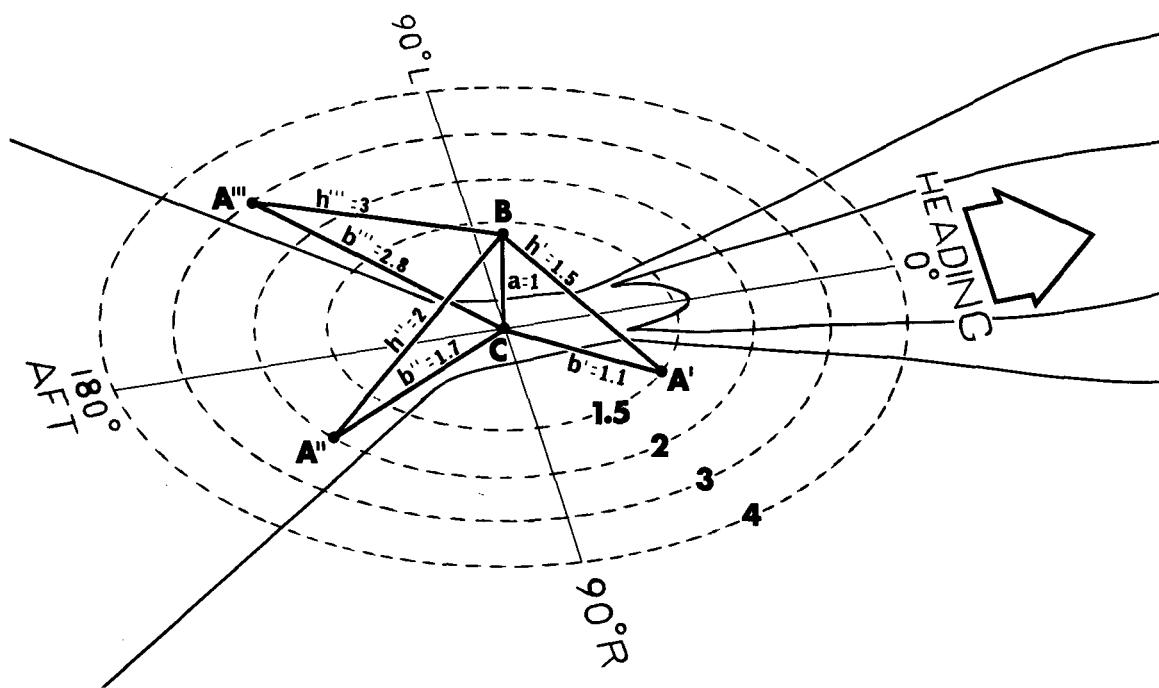


Figure 6. SCHEMATIC DIAGRAM ILLUSTRATING RELATIONSHIPS BETWEEN ALTITUDE, SLANT RANGE, AND GROUND RADIUS.

The aircraft is at B. Ground O is at C. The altitude of the aircraft, a, is expressed as 1. The calculations necessary to derive the ground radii, b' , b'' , b''' , . . . , that will yield slant ranges, h' , h'' , h''' , . . . , equal to selected multiples of altitude, are found in the footnote on page 8. The numbers, 1.5, 2, 3, . . . , located on the dashed circles, denote the slant range, expressed as a multiple of altitude, from the aircraft to that specific circle on the ground. Therefore, all points on the ground that are within, say, the number 2 dashed circle, are within a distance of 2 times the altitude of the aircraft from the cockpit.

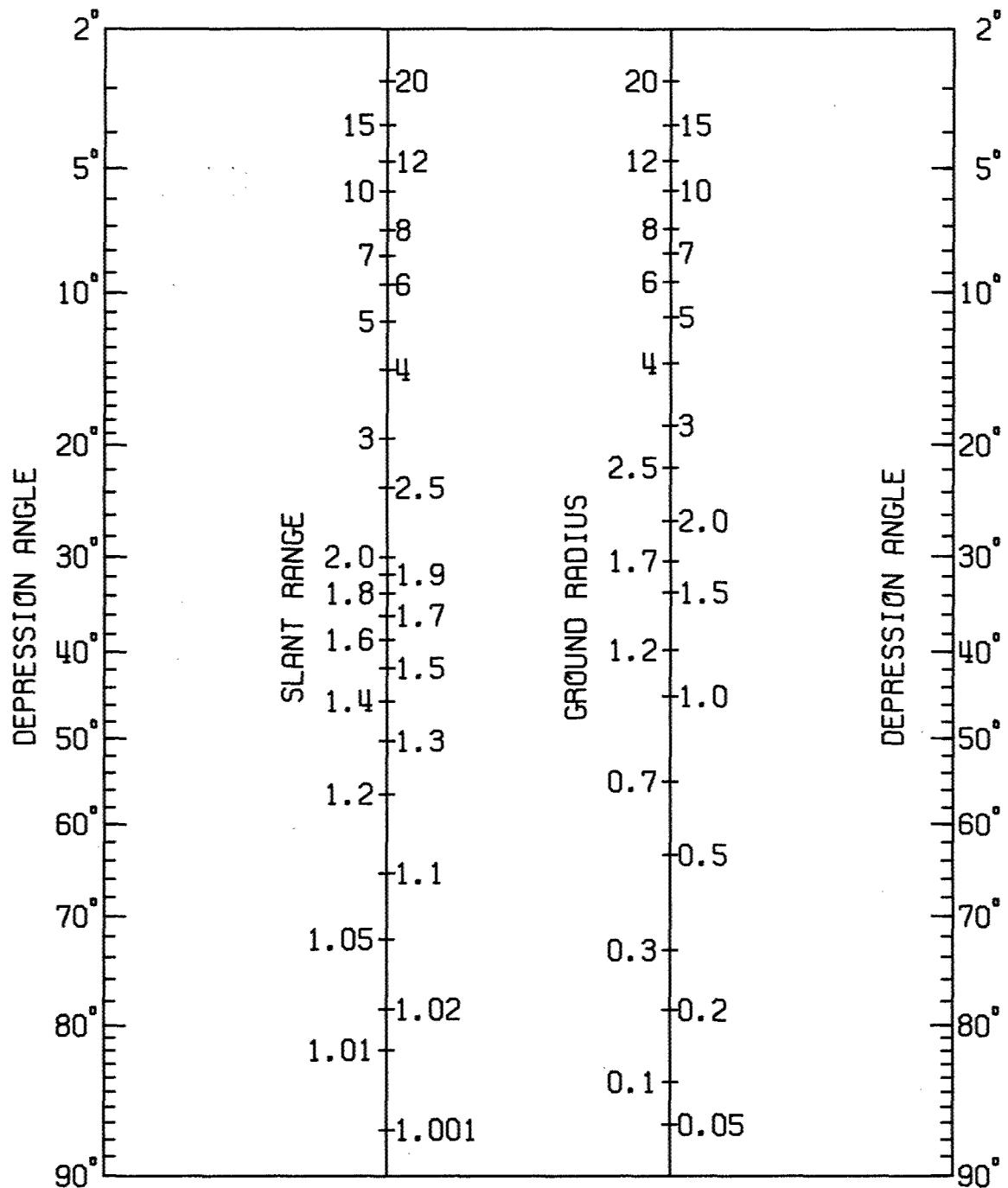


TABLE 1

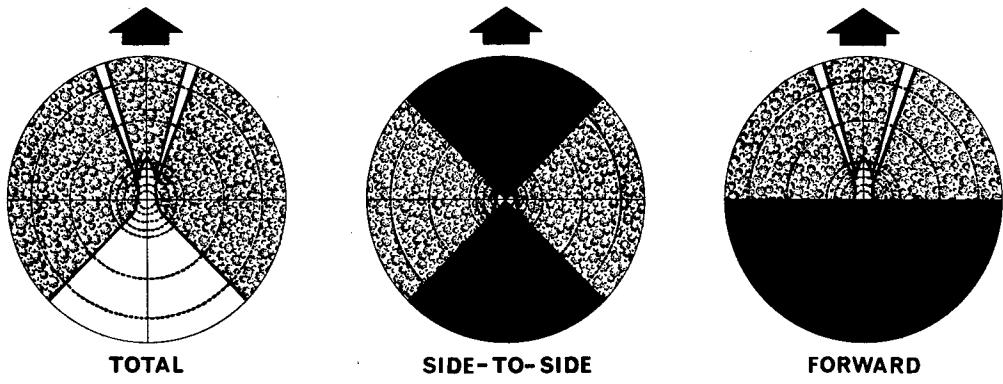
NOMOGRAPH FOR ESTIMATING DEPRESSION ANGLES IN DEGREES, AND SLANT RANGES AND GROUND RADII AS MULTIPLES OF ALTITUDE.

This nomograph illustrates the relationships between depression angle, slant range, and ground radius. With it, two of the three values may be approximated if the third is known. For instance, a horizontal line crossing the slant range scale at 2.0 (X altitude) will pass through a point in slight excess of 1.7 (X altitude) on the ground radius scale and through 30° on both depression angle scales. Therefore, knowing any one of the three values (say, slant range), one is able to estimate ground radius and depression angle. Similarly, slant range may be estimated if depression angle or ground radius is known.

In a relatively straightforward variation of our method of evaluating vision, we calculated the area of terrain visible within ground distances (radii) from ground O equal to selected multiples of altitude. This is conveniently measured on the ground visibility plots by using a compensating polar planimeter. For instance, table 2 shows that the pilot can see approximately 69% of the total land surface within a ground radius of 18 times his altitude and 43% of that within a ground radius of three times his altitude. Under certain conditions it may be appropriate to consider only vision to that portion of the land surface in front of the aircraft—or to the sides.¹ The results of these methods can also be seen in table 2.

TABLE 2

PERCENT OF TERRAIN VISIBLE WITHIN SELECTED GROUND RADII—SINGLE OR TANDEM AIRCRAFT—MIL-STD-850A.

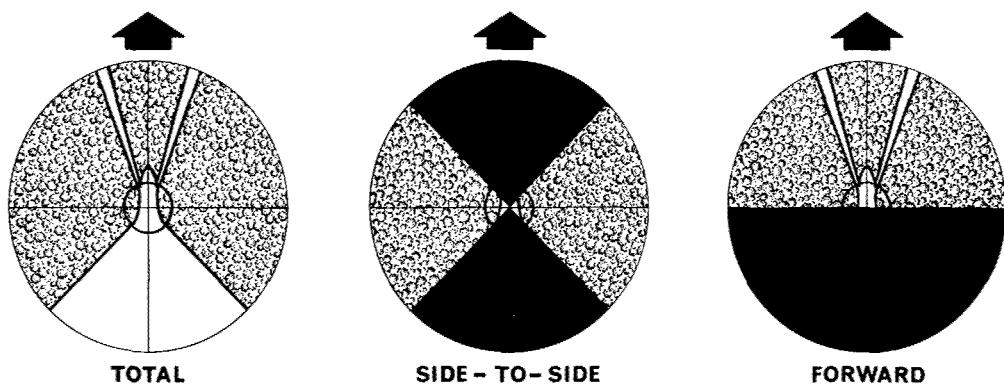


Ground Radius	Fields of View		
	Total	Side-to-Side	Forward
18 x Alt.	68.9%	95.6%	89.4%
3 x Alt.	42.8	74.6	50.6

¹Many combinations of ground radii and ground sectors may be considered. Space and time, however, does not permit us to consider all combinations. The choice of considering radii of 3 and 18 times altitude is meaningful only in that they represent, respectively, relatively short and long distances.

Another, perhaps more useful, variation of our method of evaluating vision toward the ground is to consider terrain visible within selected slant ranges from the cockpit. As in the preceding variation, the areas of the visible sectors are expressed as percentages of the total land area within the selected slant ranges. Similar to the previous method, visibility all around the aircraft is considered, as is that forward and to the sides. The results of this method for our hypothetical aircraft are found in table 3.

TABLE 3
PERCENT OF TERRAIN VISIBLE WITHIN SELECTED SLANT RANGES—SINGLE OR TANDEM AIRCRAFT—MIL-STD-850A.



Slant Range	Fields of View		
	Total	Side-to-Side	Forward
15 x Alt.	68.4%	94.9%	89.1%
10 x Alt.	67.6	94.6	85.6
5 x Alt.	56.3	88.9	69.3
3 x Alt.	41.8	71.9	49.8
2 x Alt.	18.9	36.6	22.4

RESULTS

Our method of examining visibility toward the ground was used on 12 aircraft. Selection was made in coordination with Mr. C. Bates, Jr., Chief of the Performance Requirements Branch, Aerospace Medical Research Laboratory. Most of the aircraft selected for evaluation were in service in Southeast Asia. Also included were certain others that appeared close to entering the Air Force inventory.

The intent was to take photographs from each cockpit of each aircraft. For one reason or another, however, we did not obtain suitable photographs from all cockpits. Following is a list of those aircraft and cockpits in which acceptable photographs were obtained and on which the evaluation of vision toward the ground was possible.

A-1E—Pilot	F-5B—Front
A-1E—Copilot	F-5B—Rear
A-7A	F-105D
A-26A—Pilot	F-111A—Pilot
A-26A—Copilot	OV-10A—Pilot
C-123B—Copilot	O-1A—Pilot
F-5A	O-2—Pilot (Est.)
	RF-4C—Front

The absence of data for the C-123B Pilot, F111A Copilot and O-2B Copilot does not represent a serious deficiency. In each case, side-by-side cockpits are involved; and the outline of obstructions to vision from one cockpit is nearly a perfect mirror image of that for the copilot. Ground visibility plots obtained for the C-123B pilot, for instance, is essentially a mirror image of that which would be obtained for the copilot. We were not able to obtain a suitable cockpit visibility photograph for the RF-4C rear cockpit. The O-2 aircraft used contained equipment that partially obstructed vision out of the pilot's side window. Since this equipment is not usually found in this aircraft, we estimated the normal boundaries of part of this window. This aircraft is, for this reason, denoted as O-2—Pilot (Est.).

Angular coordinates describing obstacles to vision were measured on the cockpit visibility photographs. Cockpit visibility records were made from the photographs only for the purpose of illustrating clearly the outlines of obstructions.

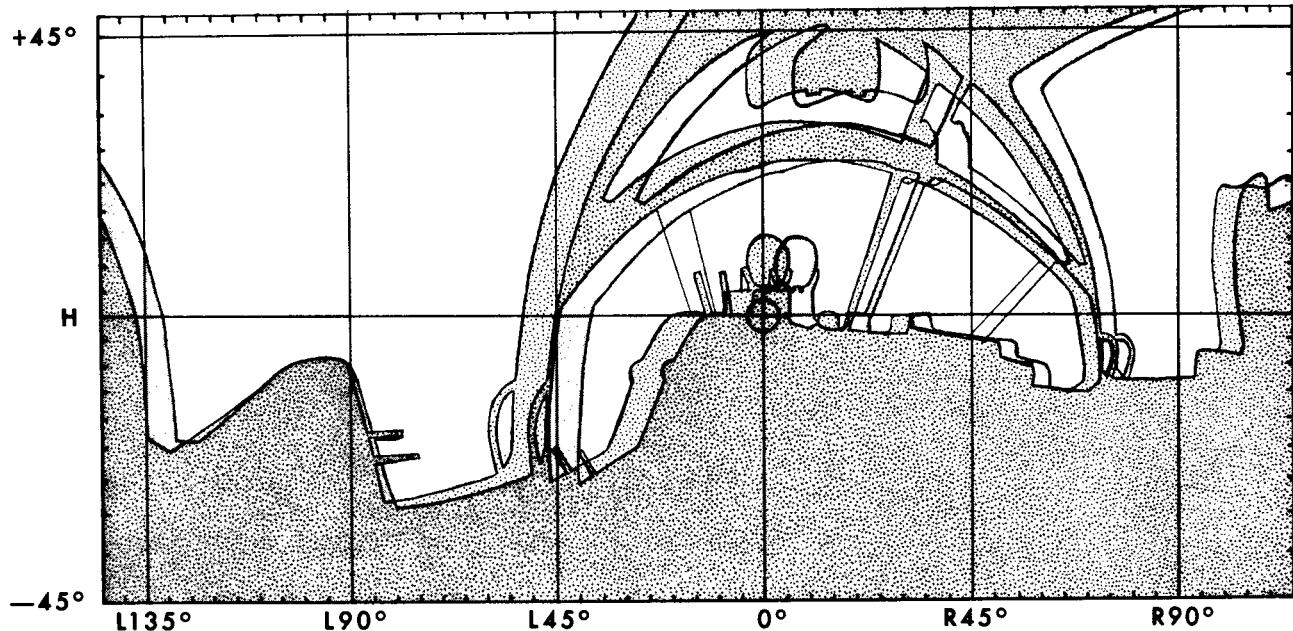
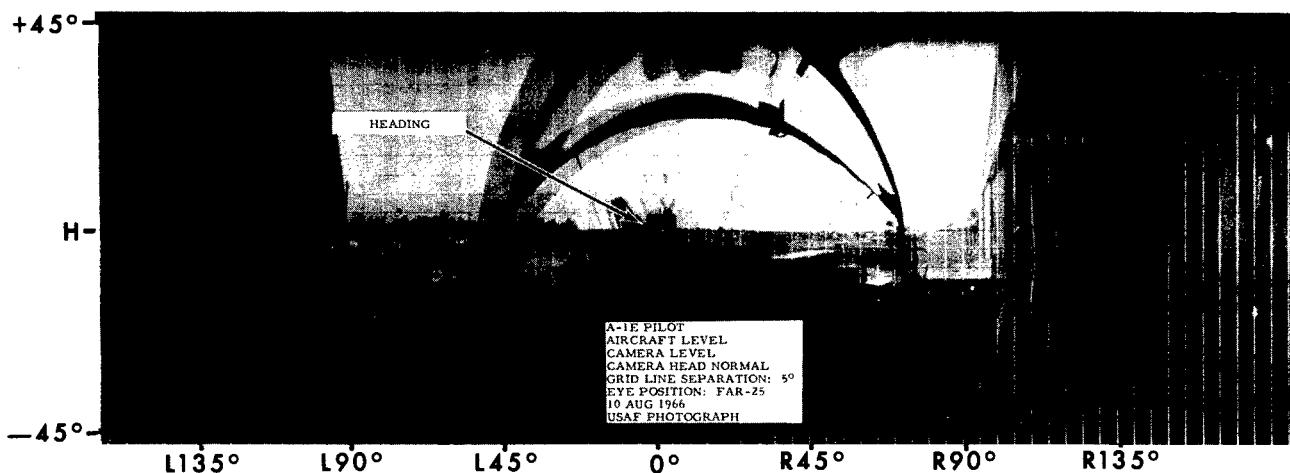
For convenience and because of uncertainty regarding a *typical* aircraft attitude, we have examined vision with the aircraft adjusted to be level. The results of these examinations are to be found beginning on page —. Tabular data for all ground visibility plots are found in Appendix II. Most of our calculations were performed by computer. It was relatively simple, therefore, to program different angles of pitch and roll.¹ However, space does not permit us to include in this report the analyses of the effects of a meaningful range of different angles of pitch and roll for all of our aircraft. We have, therefore, elected to limit such an analysis to only one, the RF-4C from cockpit. The results of this exercise can be found beginning on page —. Even though we cannot include them in this report, we have obtained tabular data and basic information on ground visibility plots for selected angles of pitch and roll on the remaining aircraft and have them on file.

It is not a simple matter to determine that one aircraft is *better* than another in terms of the extent to which it affords good vision toward the ground. When selecting aircraft for visual reconnaissance, criteria must include a consideration of the sectors into which good vision is required, as well as appropriate ground distances and slant ranges. The method described here will yield objective information, which is helpful in making such a selection.

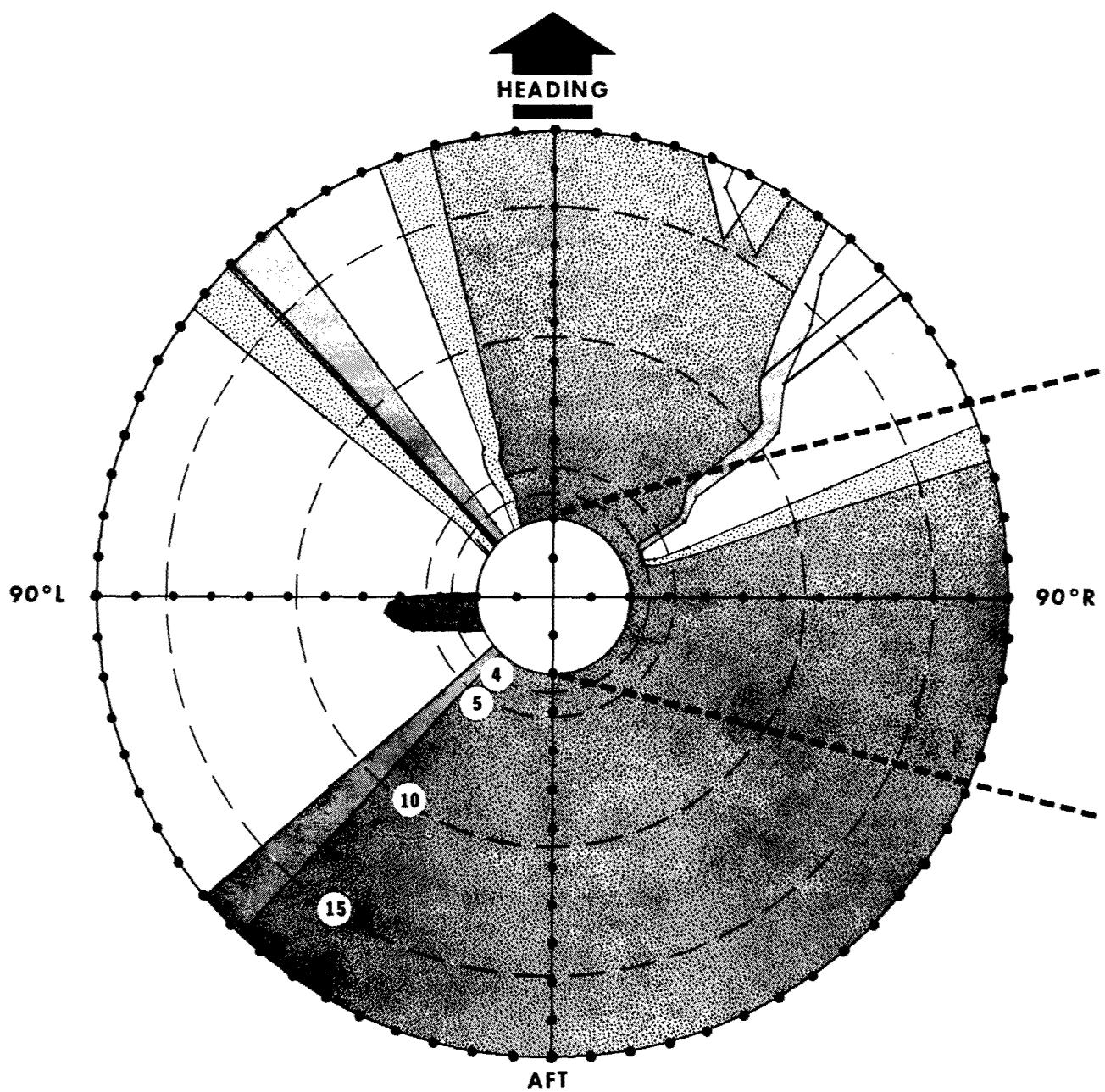
¹The basic computer program for all calculations is given in Appendix III.

**VISIBILITY TOWARD THE GROUND FROM SELECTED
TACTICAL AIRCRAFT— HORIZONTAL AIRCRAFT ATTITUDE**

A-1E Pilot



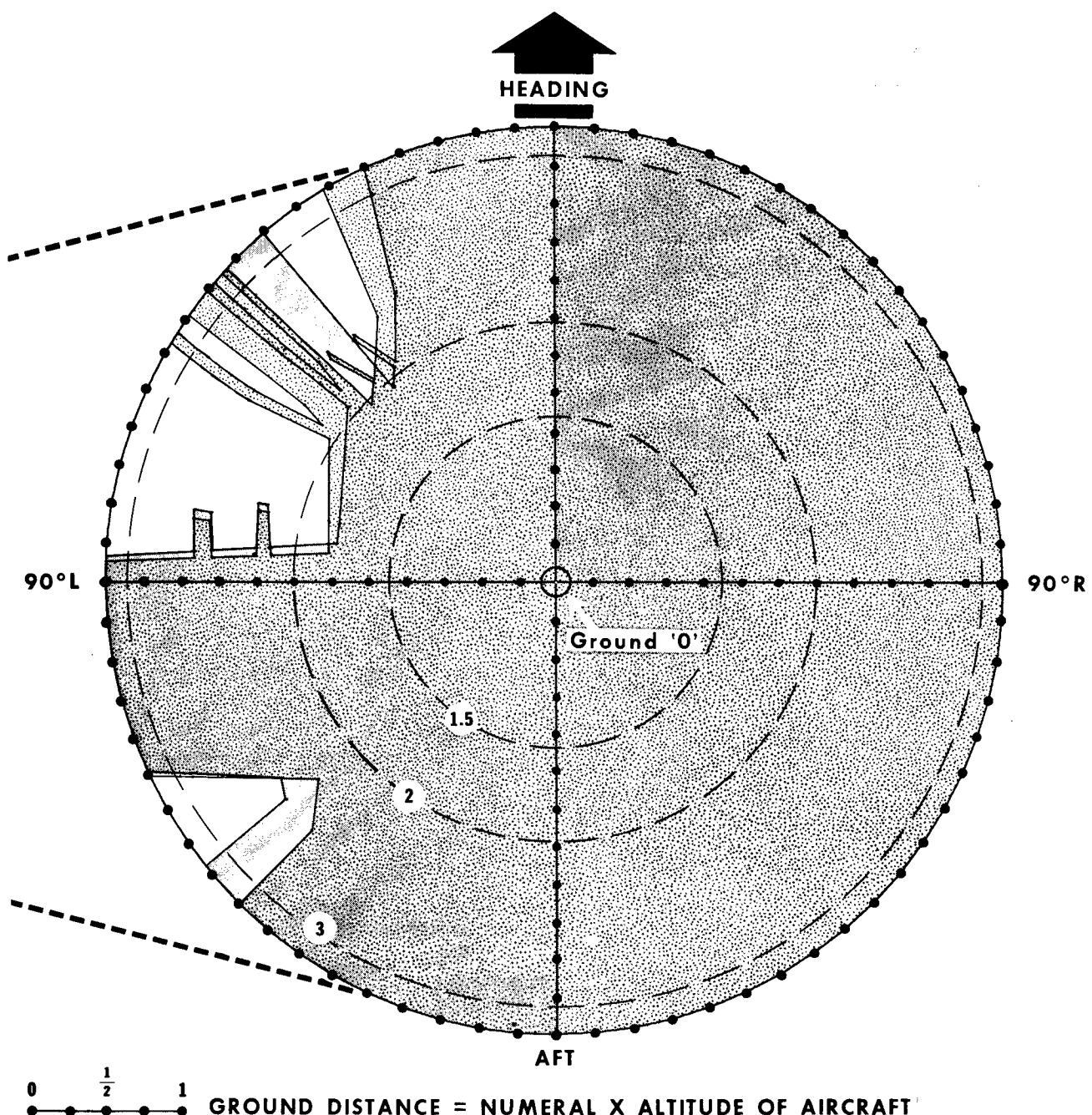
**Figure 7. Binocular Cockpit Visibility Photograph and Record
- A-1E Pilot, Aircraft Level**



SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

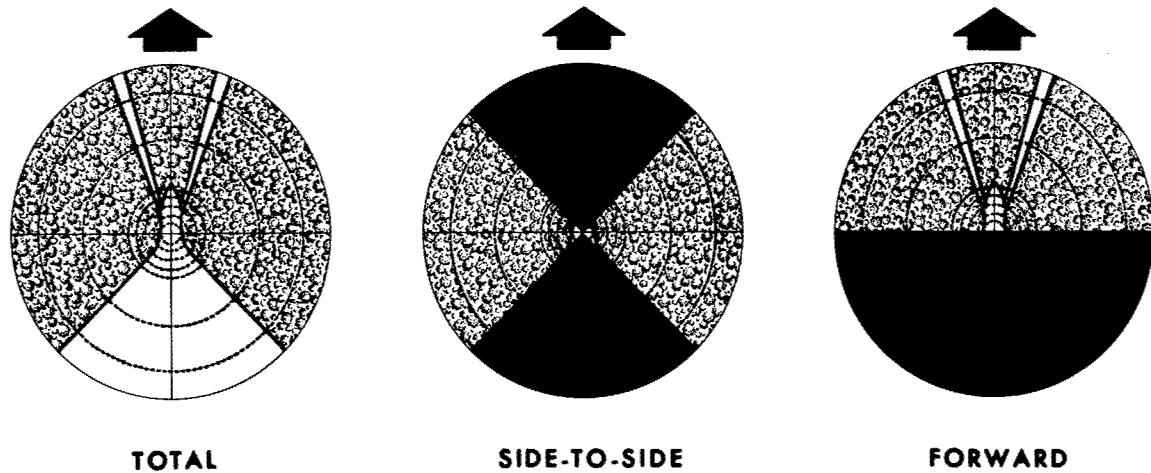
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 8. Ground Visibility Plots
- A-1E Pilot, Aircraft Level**



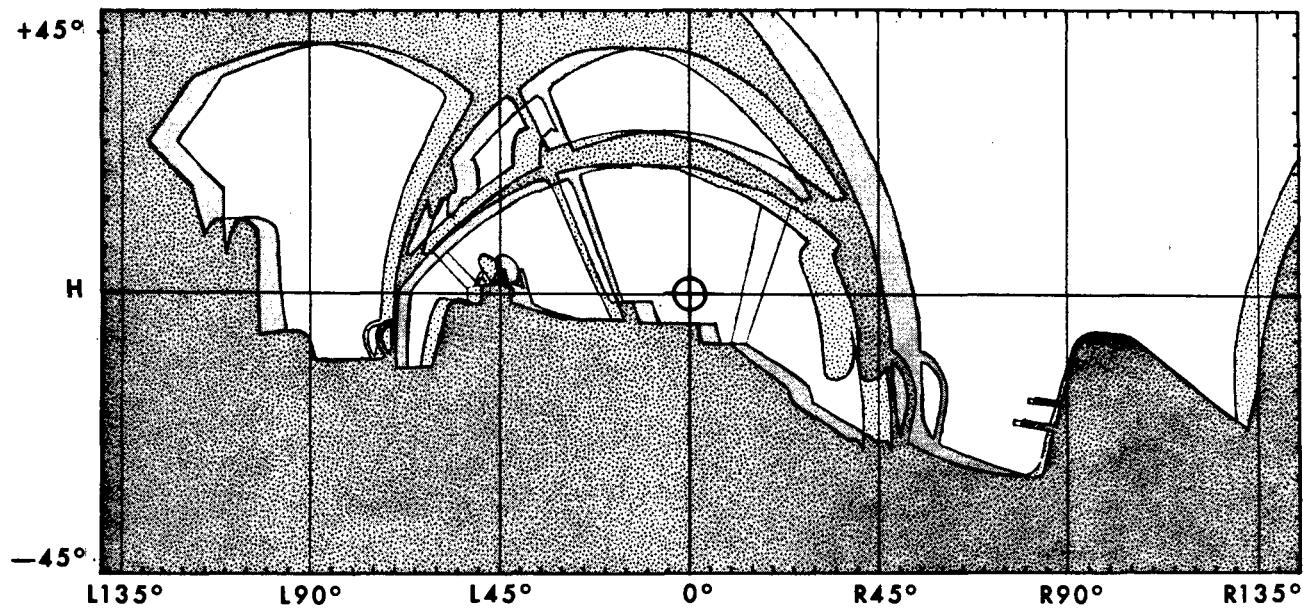
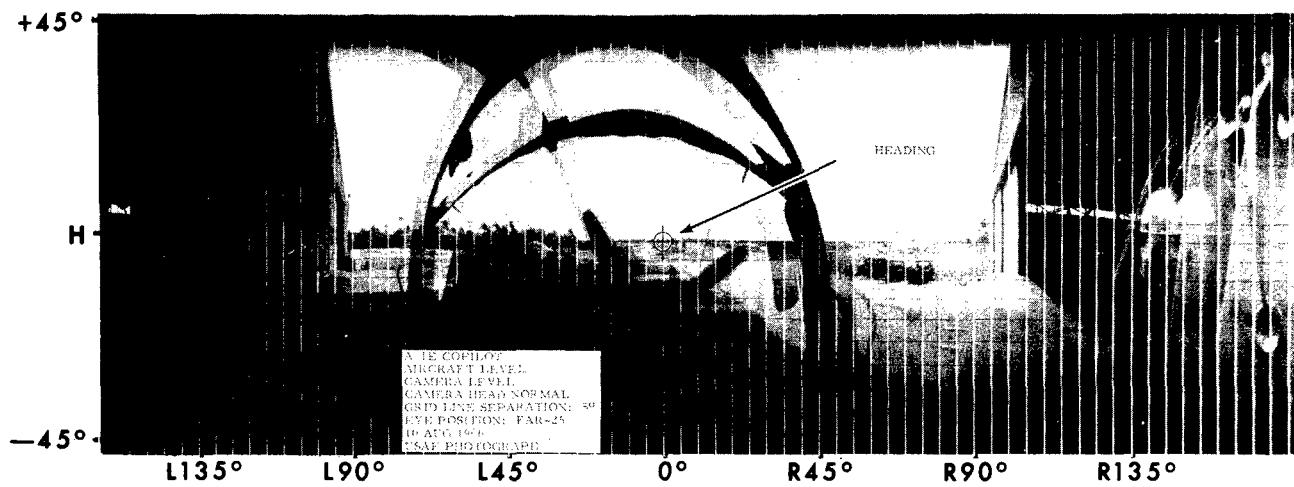
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 4. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - A-1E Pilot, Aircraft Level

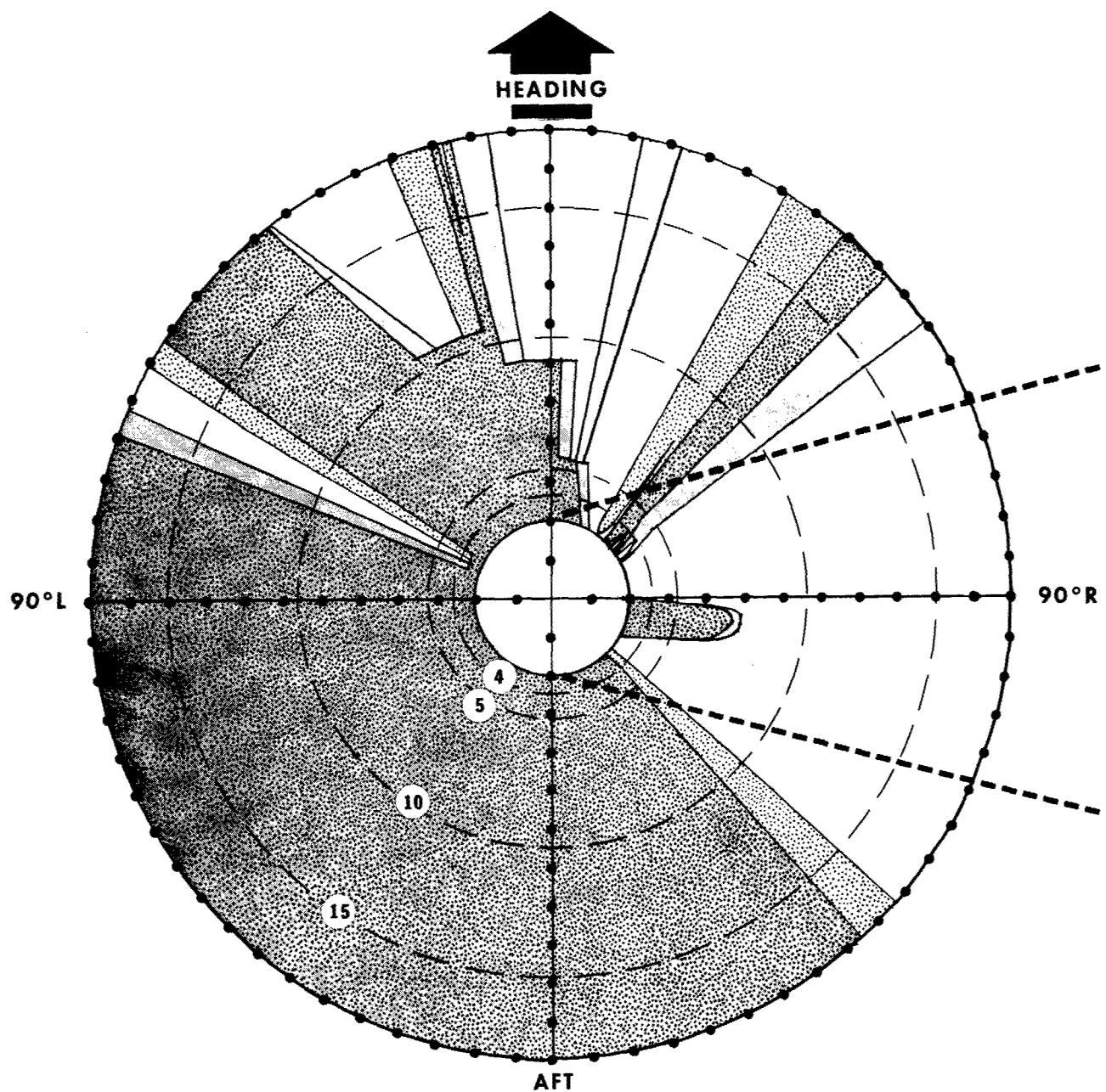


<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	33.8%	52.3%	44.0%
	Right or Left	37.3%	58.1%	51.1%
	Right and Left	28.9%	48.8%	37.7%
3 X Alt	Right	9.6%	15.1%	15.3%
	Right or Left	11.9%	17.9%	19.9%
	Right and Left	7.3%	11.9%	12.6%
<i>Slant Range</i>				
15 X Alt	Right	31.8%	51.5%	41.1%
10 X Alt	Right	27.7%	45.3%	35.1%
5 X Alt	Right	16.9%	27.9%	23.4%
4 X Alt	Right	13.6%	21.1%	20.3%
3 X Alt	Right	8.4%	13.3%	14.0%
2 X Alt	Right	0.9%	1.7%	1.6%
1.5 X Alt	Right	0.0%	0.0%	0.0%

A-1E Copilot



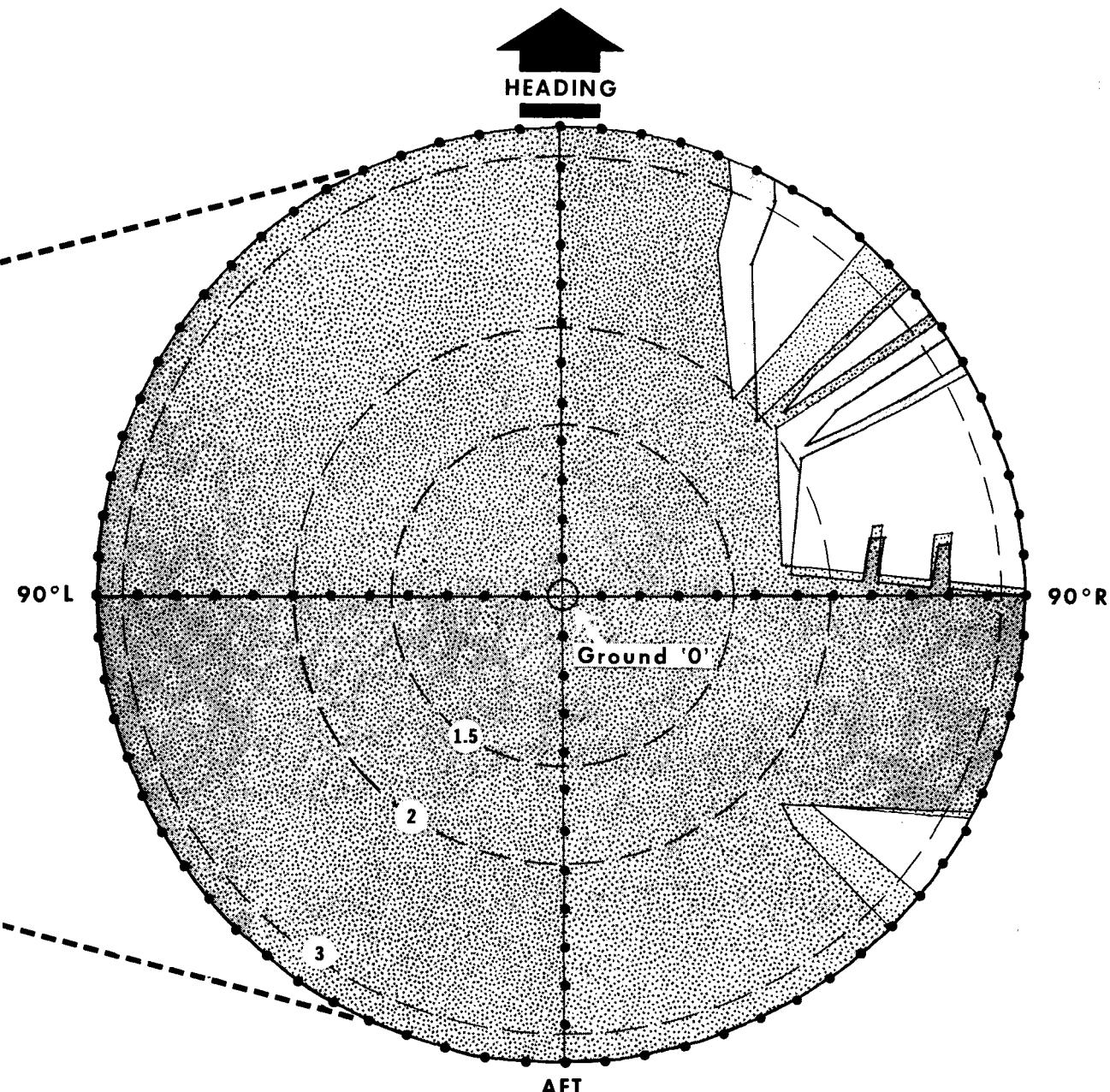
**Figure 9. Binocular Cockpit Visibility Photograph and Record
- A-1E Copilot, Aircraft Level**



SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

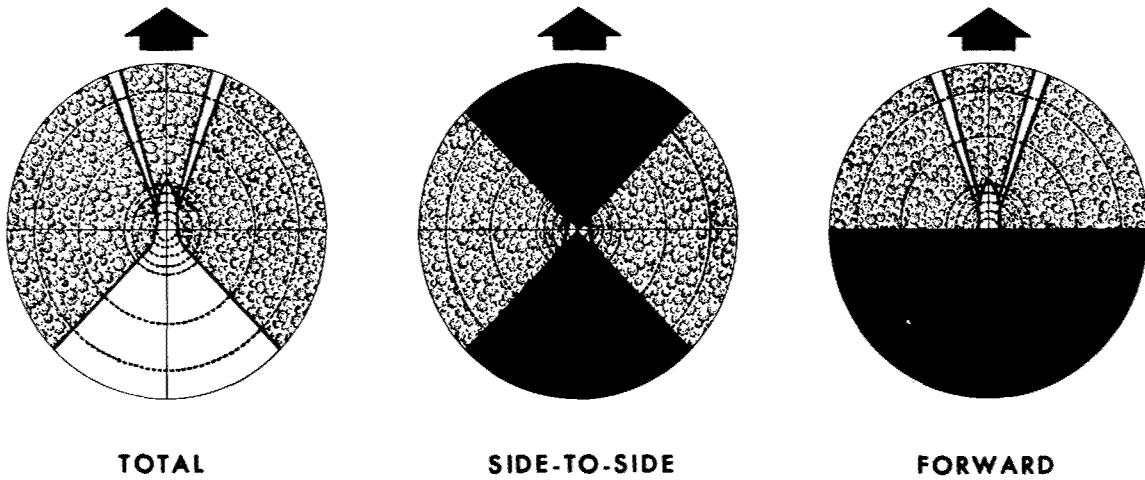
**Figure 10. Ground Visibility Plots
- A-1E Copilot, Aircraft Level**



GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

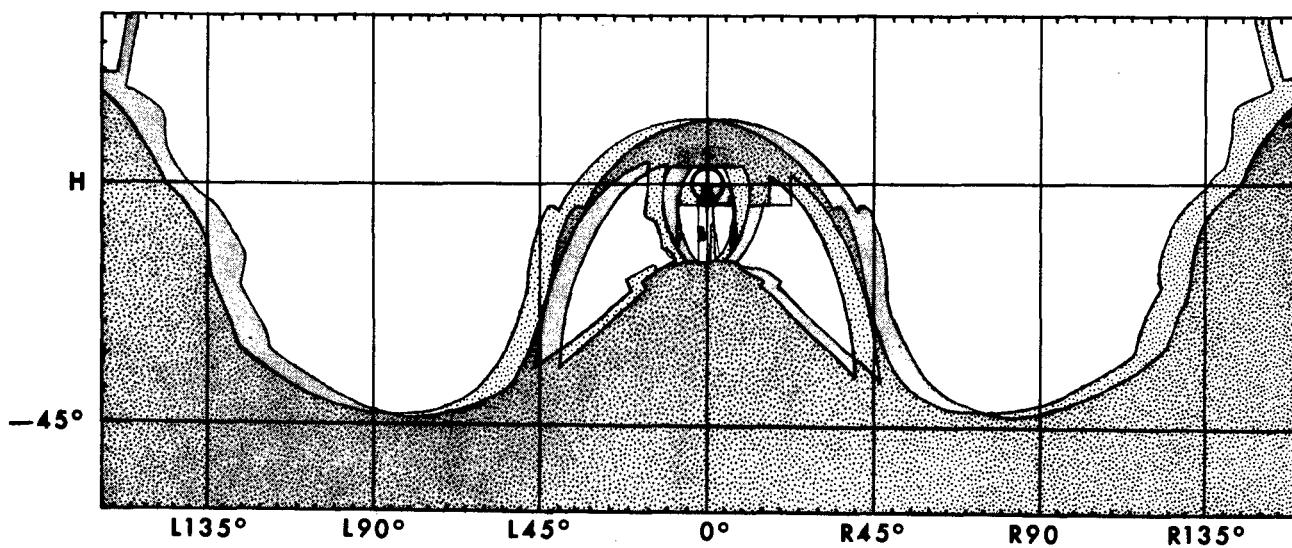
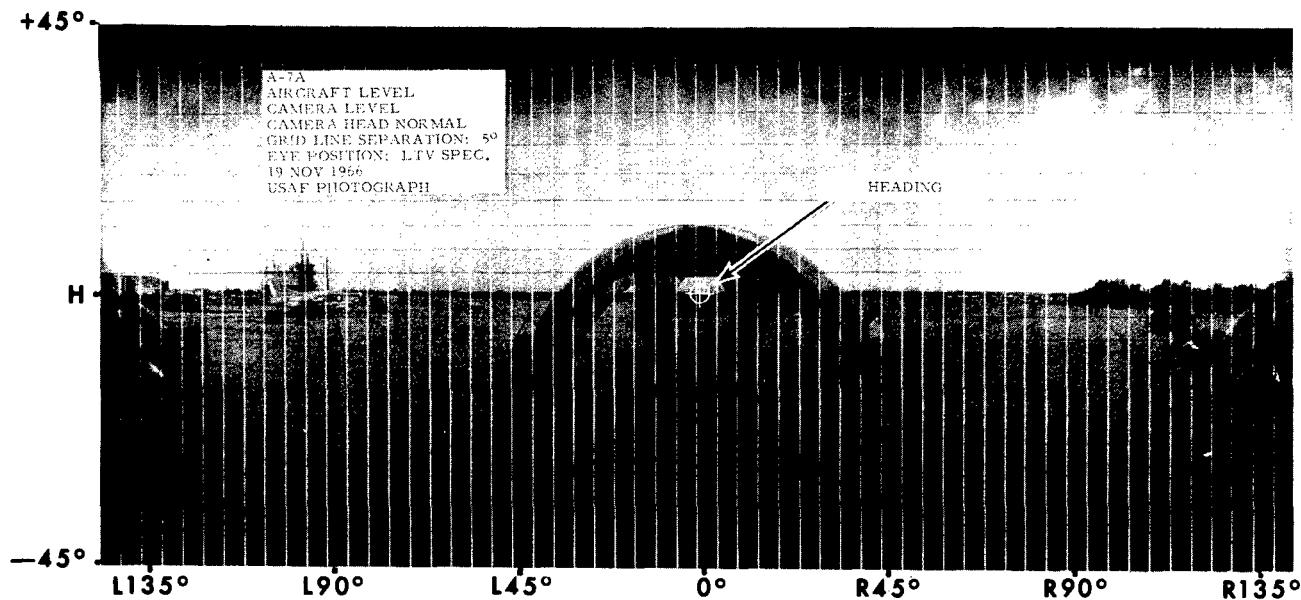
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 5. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - A-1E Copilot, Aircraft Level

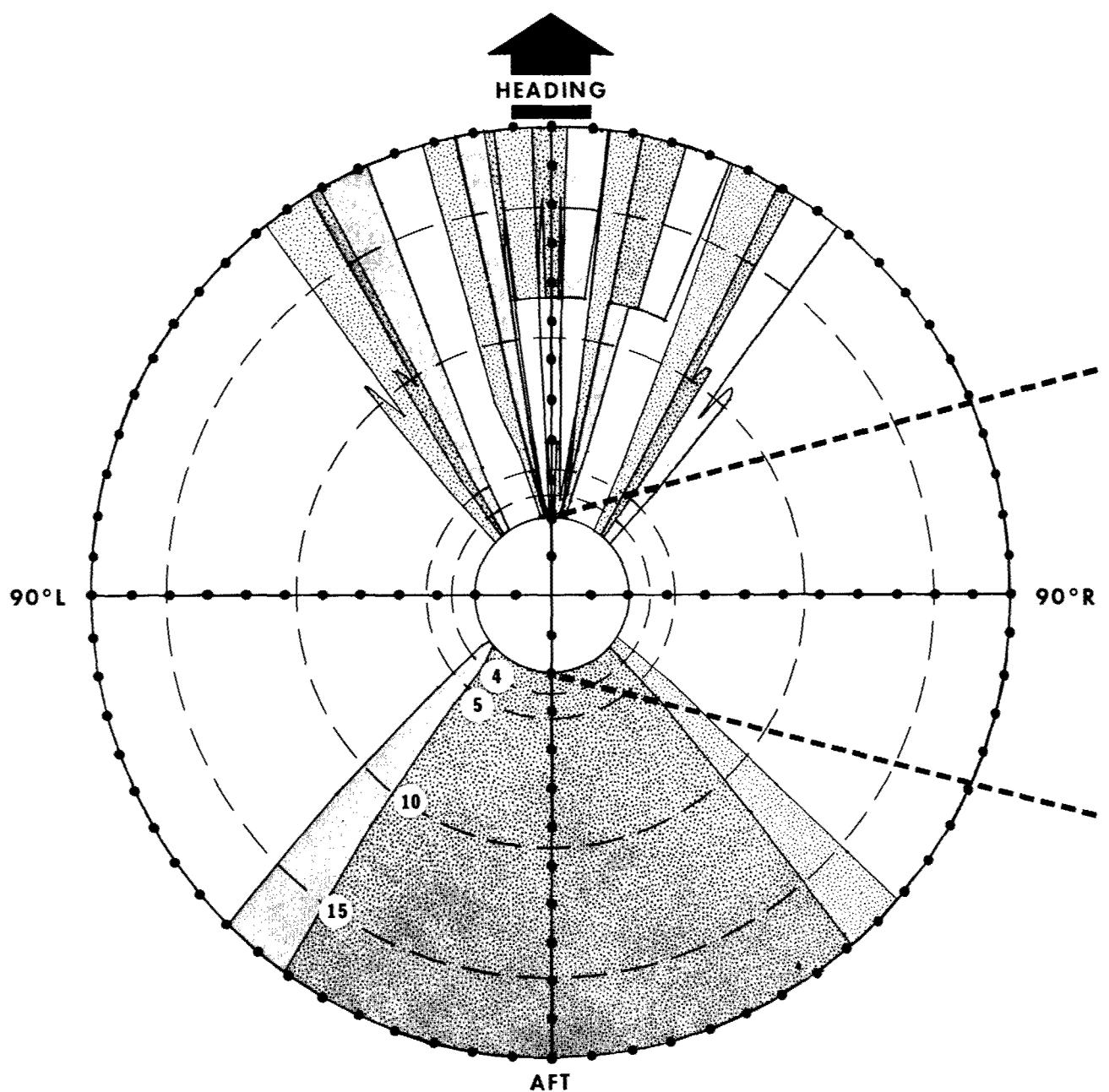


<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	38.4%	46.6%	56.1%
	Right or Left	42.4%	50.7%	62.0%
	Right and Left	32.5%	41.1%	44.5%
3 X Alt	Right	10.6%	15.9%	19.1%
	Right or Left	12.7%	19.2%	22.0%
	Right and Left	7.7%	12.5%	13.7%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	35.2%	46.8%	50.3%
10 X Alt	Right	28.4%	41.8%	40.6%
5 X Alt	Right	17.9%	25.9%	27.8%
4 X Alt	Right	14.0%	23.7%	23.7%
3 X Alt	Right	9.6%	14.6%	17.7%
2 X Alt	Right	1.7%	3.2%	3.1%
1.5 X Alt	Right	0.0%	0.0%	0.0%

A - 7A



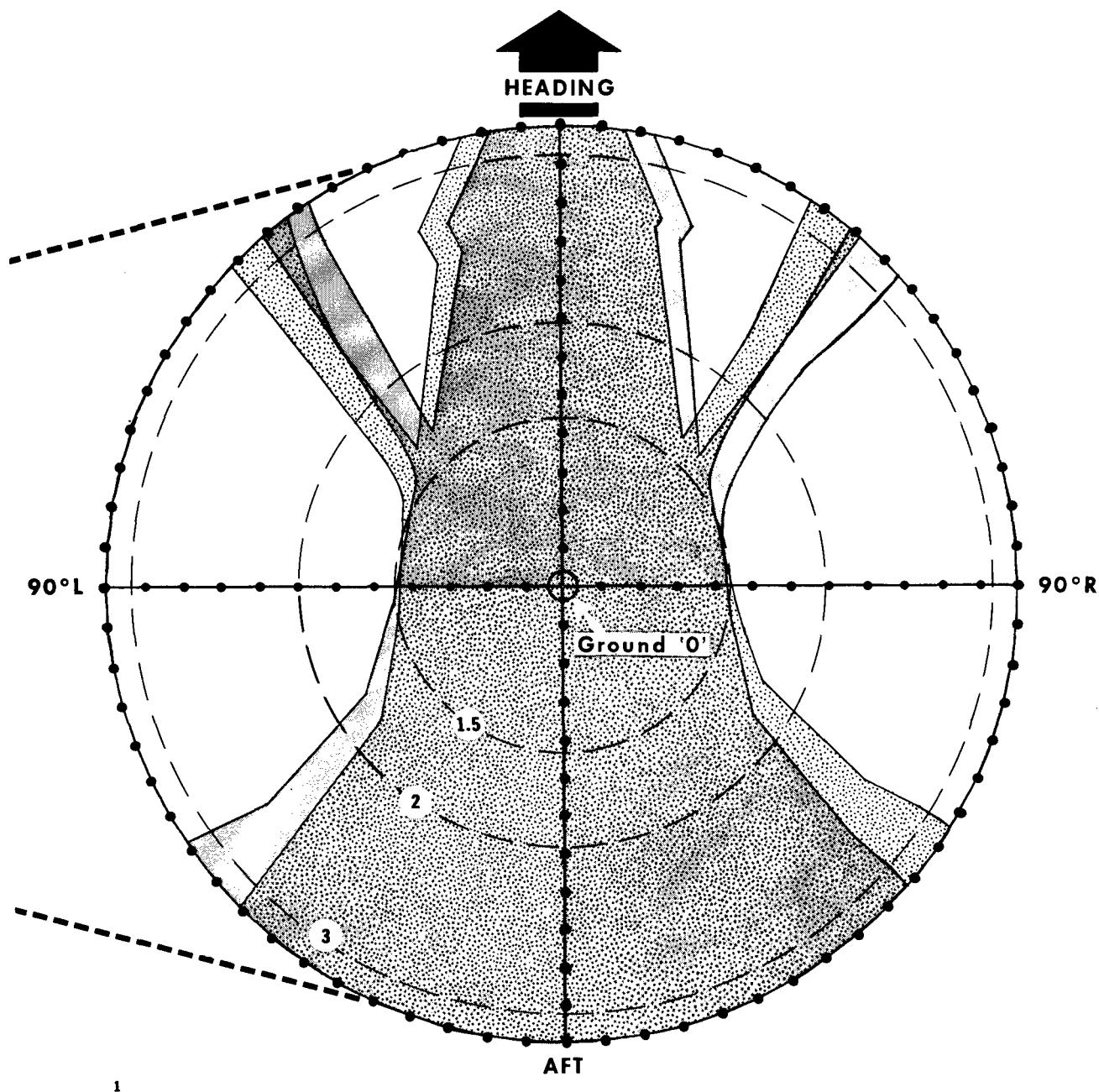
**Figure 11. Binocular Cockpit Visibility Photograph and Record
- A-7A, Aircraft Level**



SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

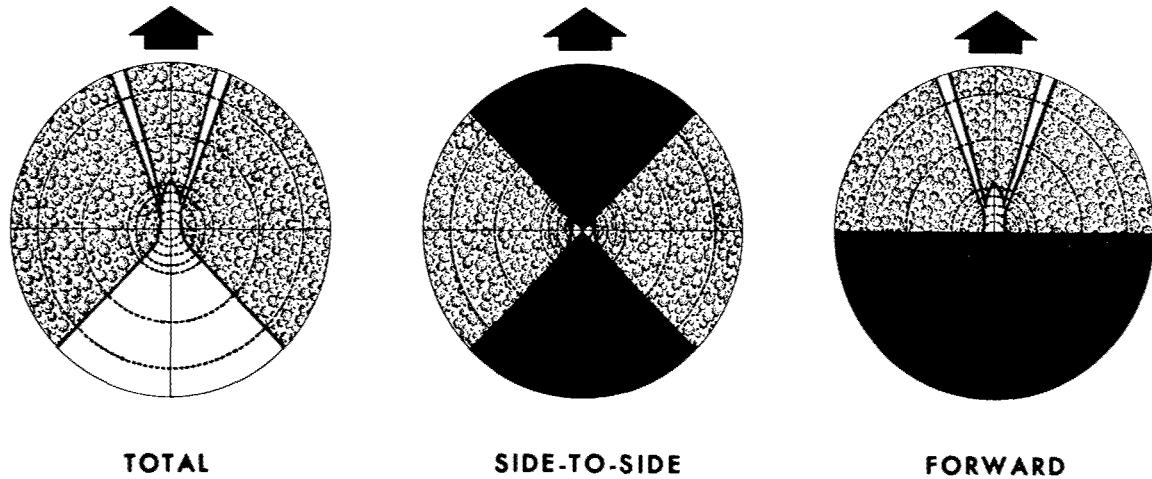
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 12. Ground Visibility Plots
- A-7A , Aircraft Level**



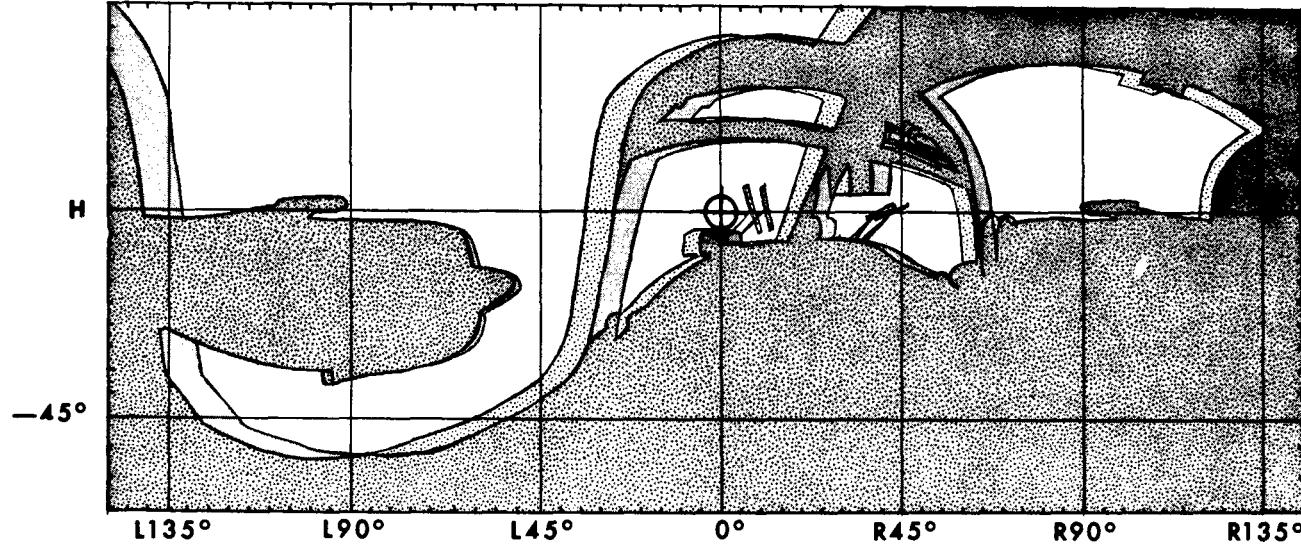
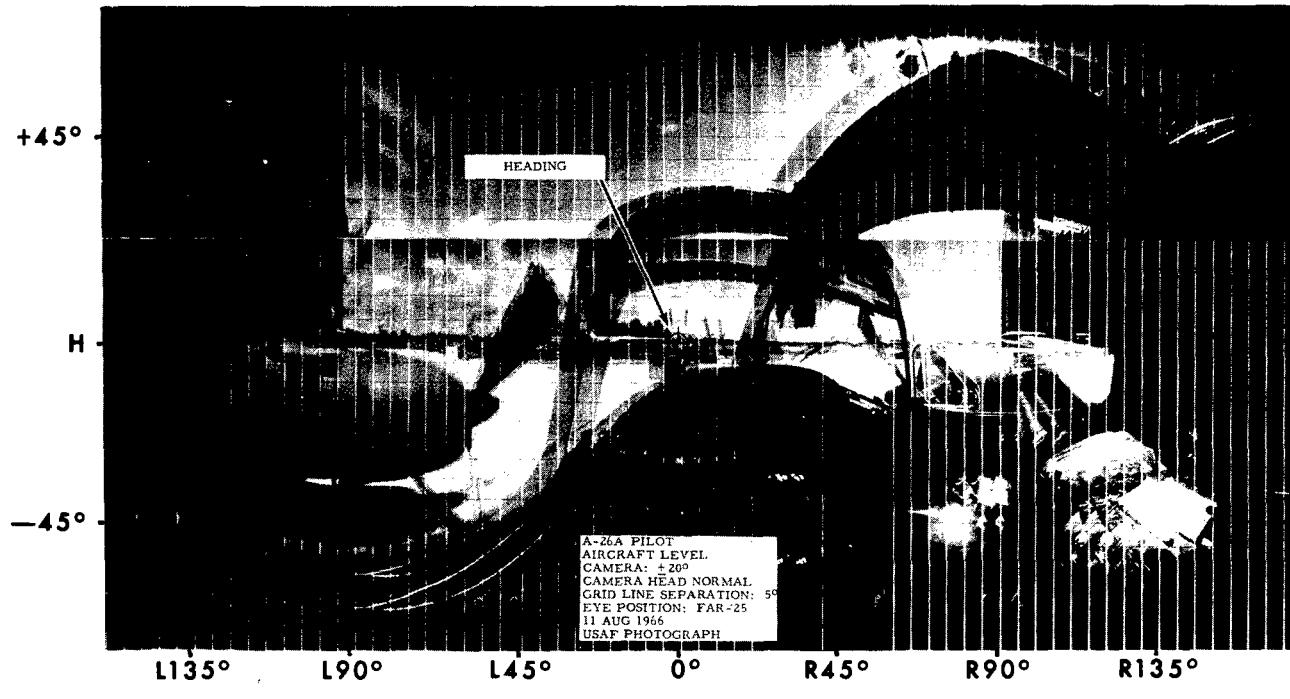
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 6. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - A-7A, Aircraft Level

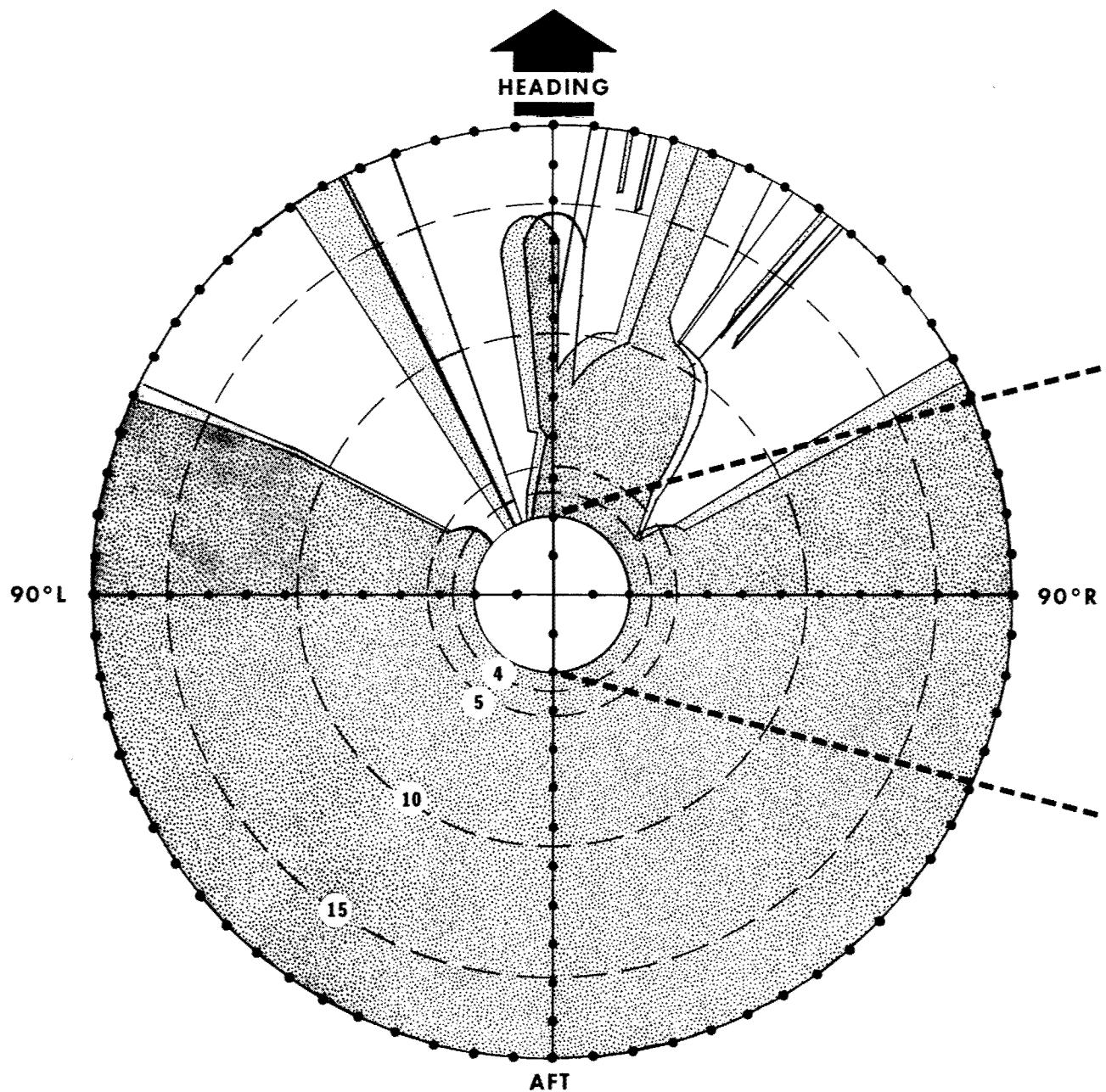


<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	63.2%	92.8%	77.5%
	Right or Left	72.0%	95.7%	90.8%
	Right and Left	54.2%	91.5%	64.6%
3 X Alt	Right	44.4%	70.7%	55.6%
	Right or Left	49.3%	76.4%	62.7%
	Right and Left	38.8%	65.0%	49.0%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	64.0%	95.2%	80.2%
10 X Alt	Right	63.9%	93.5%	82.6%
5 X Alt	Right	56.5%	85.0%	73.0%
4 X Alt	Right	52.0%	79.2%	67.9%
3 X Alt	Right	43.8%	71.7%	55.5%
2 X Alt	Right	23.4%	42.8%	29.6%
1.5 X Alt	Right	1.5%	3.1%	0.6%

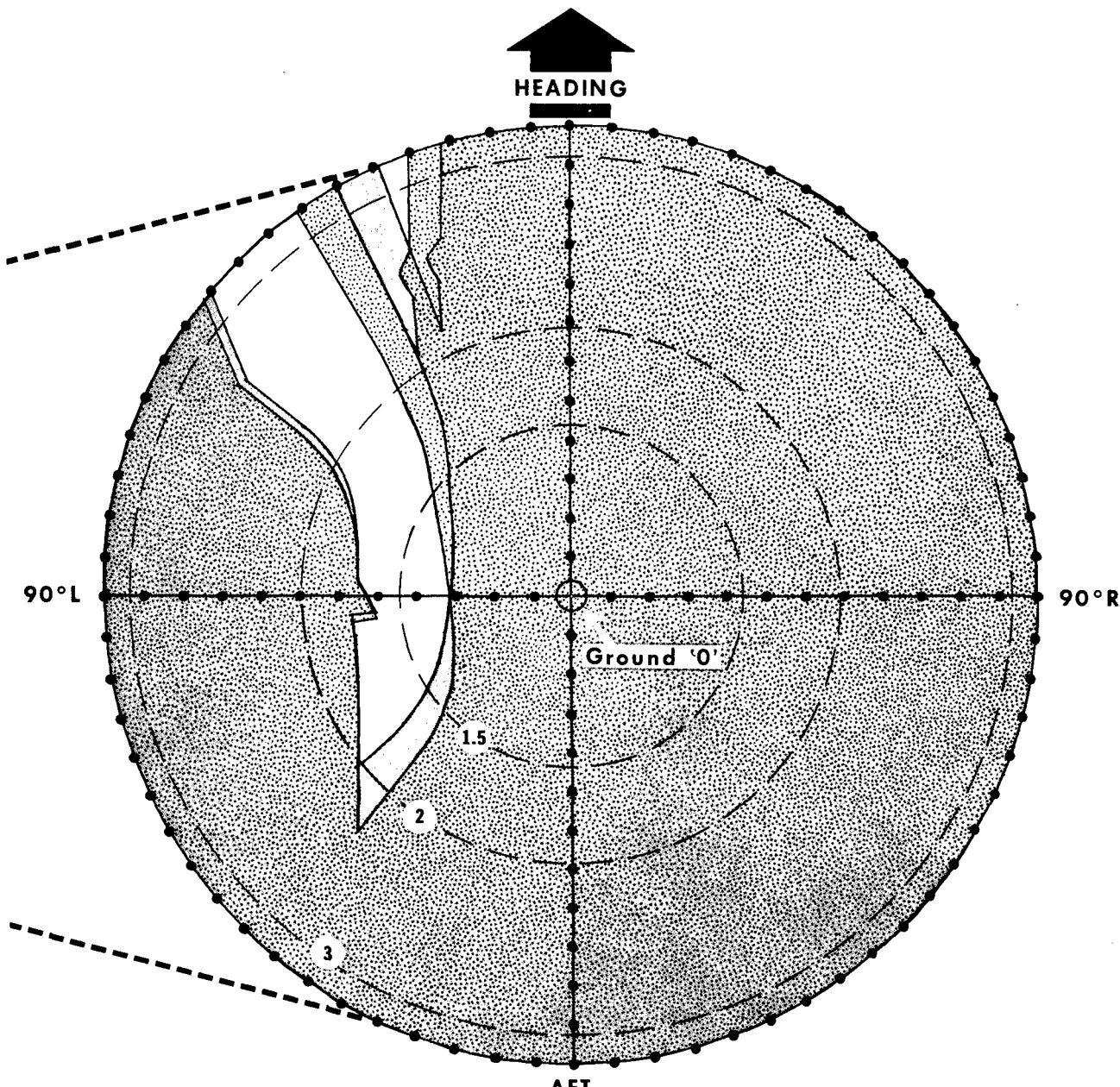
A-26A Pilot



**Figure 13. Binocular Cockpit Visibility Photograph and Record
- A-26A Pilot, Aircraft Level**



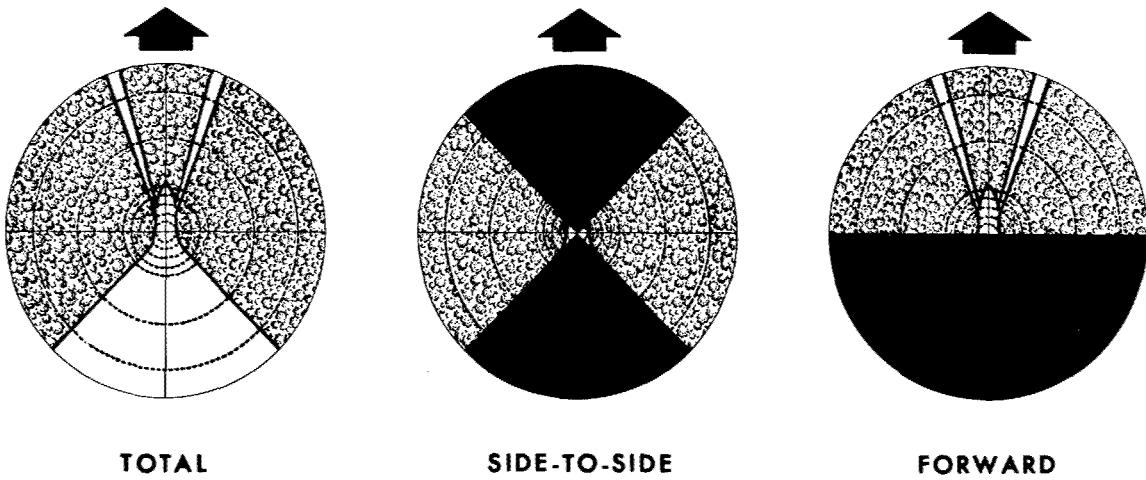
**Figure 14. Ground Visibility Plots
- A-26A Pilot , Aircraft Level**



0 $\frac{1}{2}$ 1 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

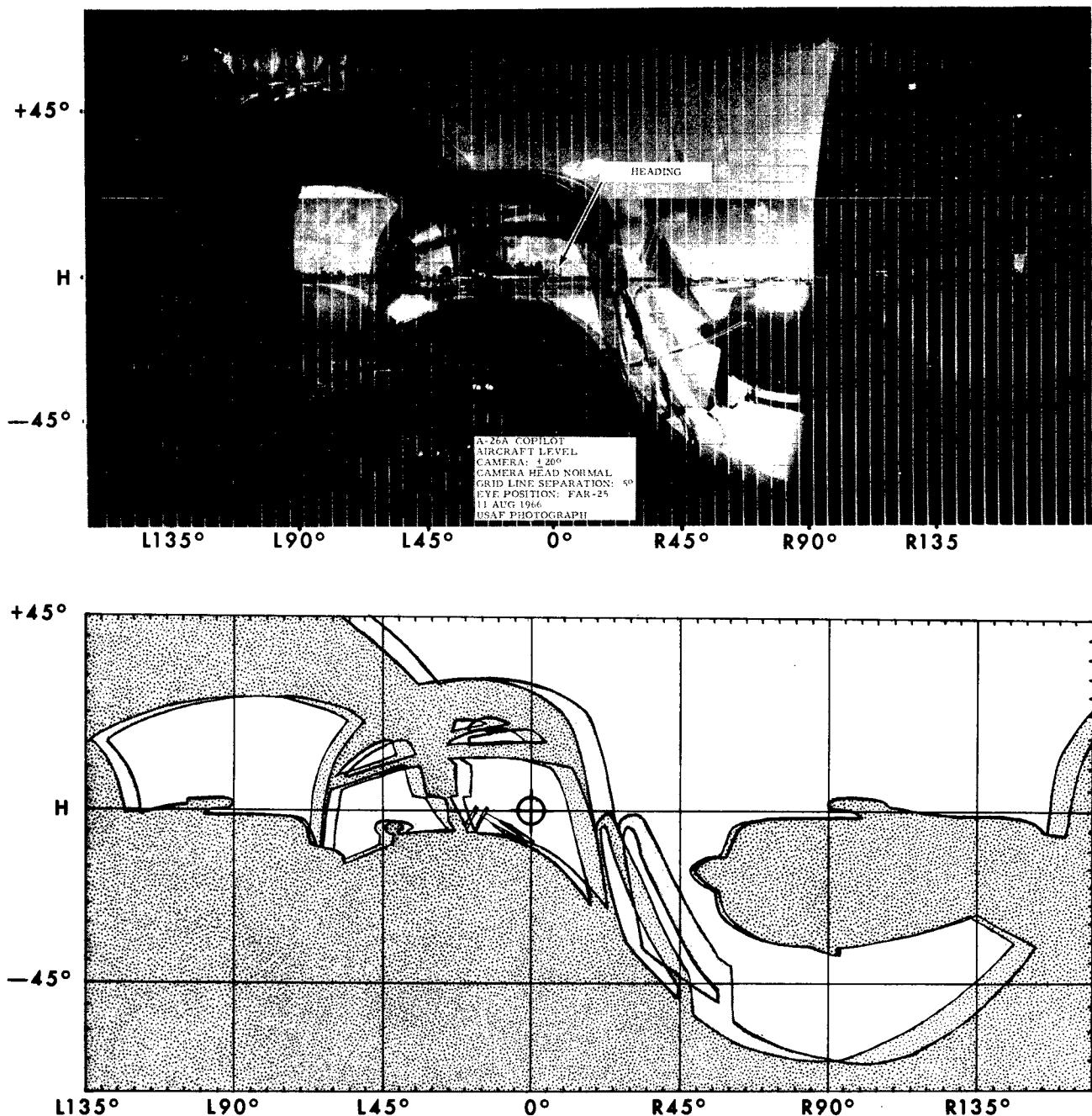
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 7. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - A-26A Pilot, Aircraft Level

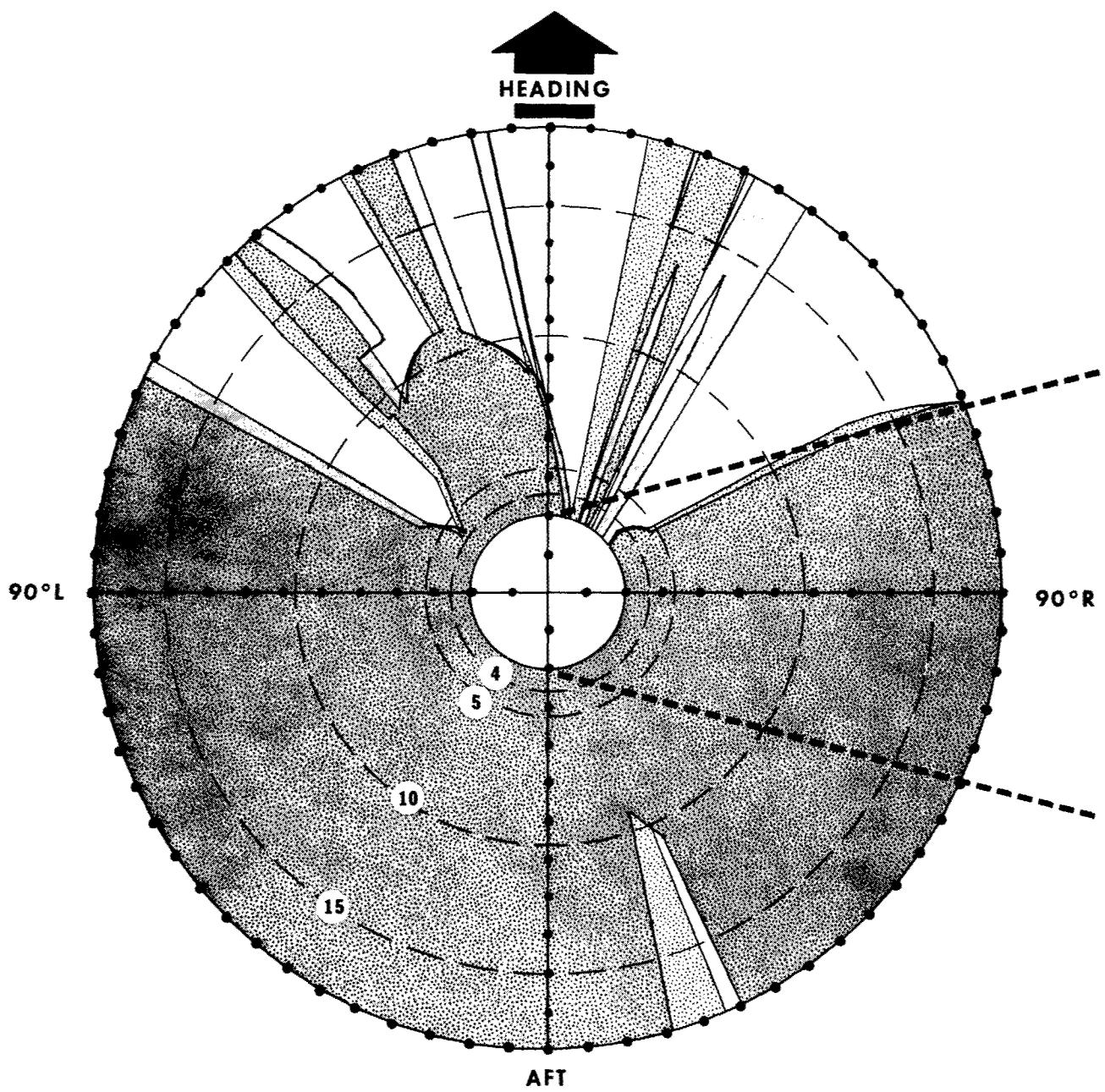


<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	24.1%	16.8%	48.1%
	Right or Left	28.2%	18.5%	56.4%
	Right and Left	20.0%	15.8%	40.0%
3 X Alt	Right	8.9%	12.5%	13.1%
	Right or Left	11.2%	13.0%	18.0%
	Right and Left	7.1%	10.4%	11.3%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	21.9%	16.5%	43.4%
10 X Alt	Right	16.0%	14.6%	29.2%
5 X Alt	Right	9.0%	7.7%	17.5%
4 X Alt	Right	8.9%	9.4%	14.0%
3 X Alt	Right	9.2%	14.0%	13.6%
2 X Alt	Right	12.8%	25.3%	13.2%
1.5 X Alt	Right	8.0%	16.1%	6.5%

A - 26A Copilot



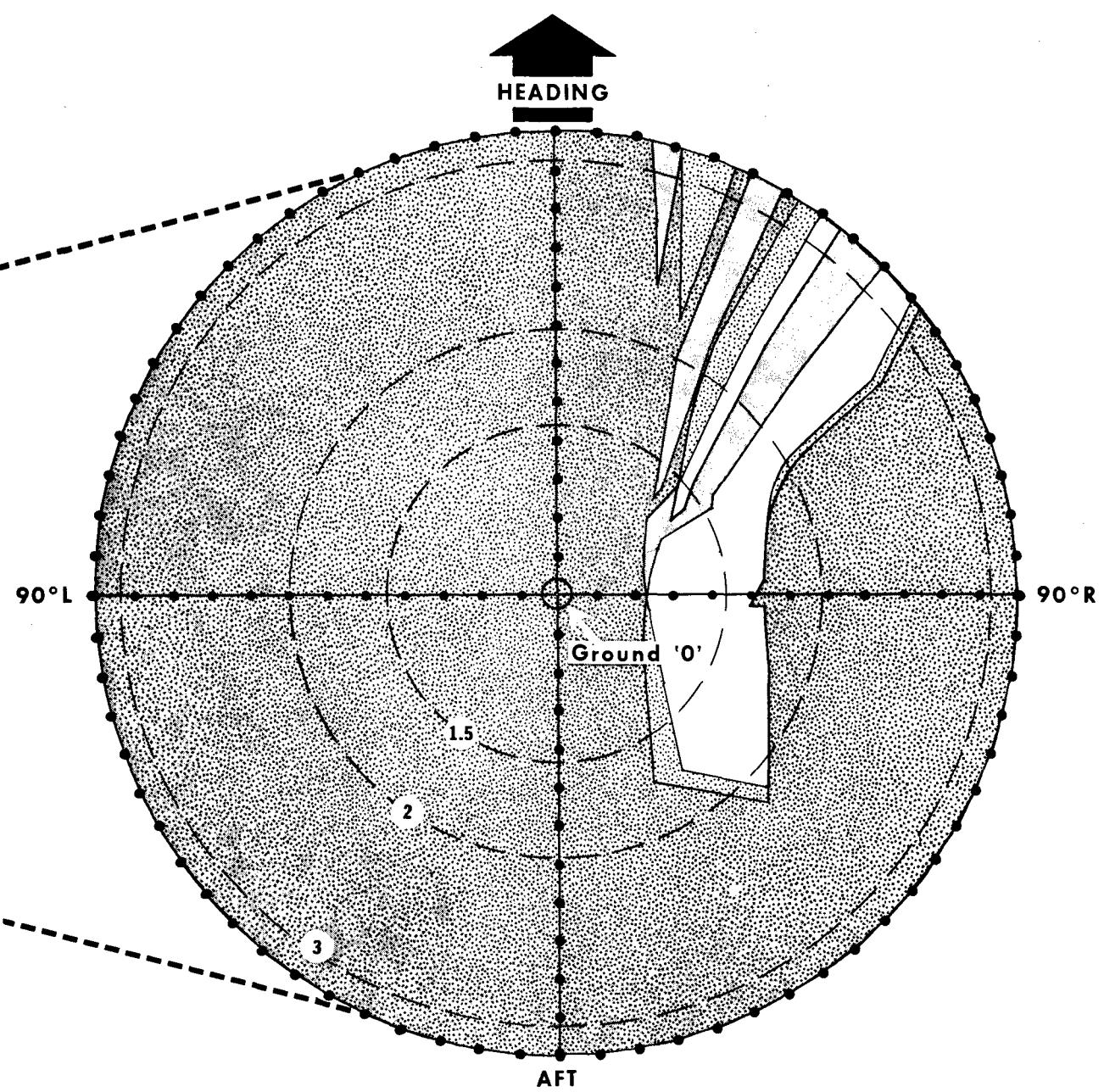
**Figure 15. Binocular Cockpit Visibility Photograph and Record
- A-26A Copilot, Aircraft Level**



SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

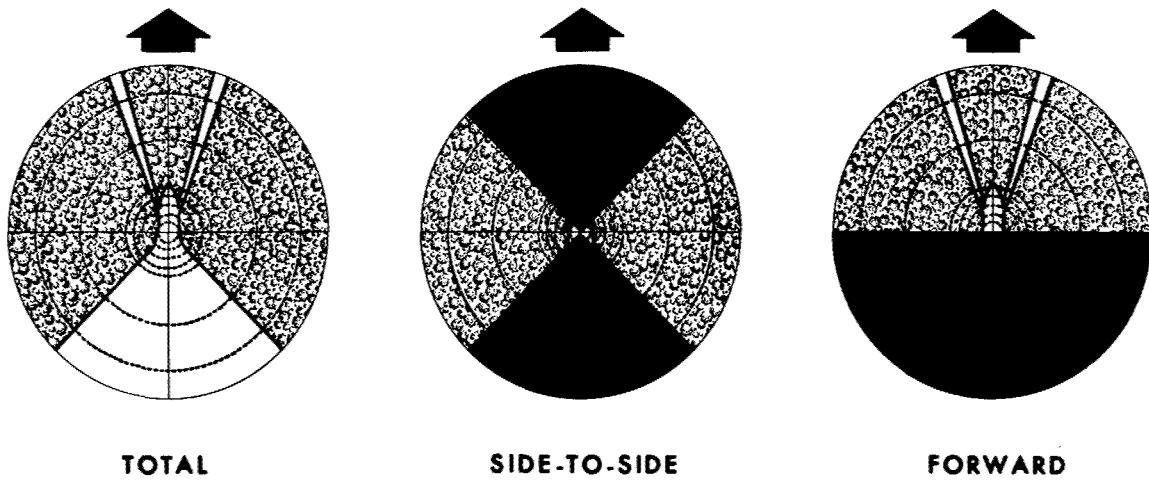
**Figure 16. Ground Visibility Plots
- A-26A Copilot, Aircraft Level**



0 $\frac{1}{2}$ 1 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 8. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - A-26A Copilot, Aircraft Level



<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	23.2%	16.5%	45.5%
	Right or Left	27.4%	18.0%	51.6%
	Right and Left	19.1%	15.3%	37.5%
3 X Alt	Right	10.3%	13.7%	15.2%
	Right or Left	13.1%	14.7%	19.3%
	Right and Left	6.0%	11.7%	6.5%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	21.6%	16.0%	42.0%
10 X Alt	Right	15.8%	14.8%	31.3%
5 X Alt	Right	9.0%	7.5%	16.9%
4 X Alt	Right	8.8%	8.9%	15.2%
3 X Alt	Right	11.0%	14.0%	15.6%
2 X Alt	Right	17.3%	28.9%	18.3%
1.5 X Alt	Right	14.9%	27.0%	15.5%

C-123B Copilot

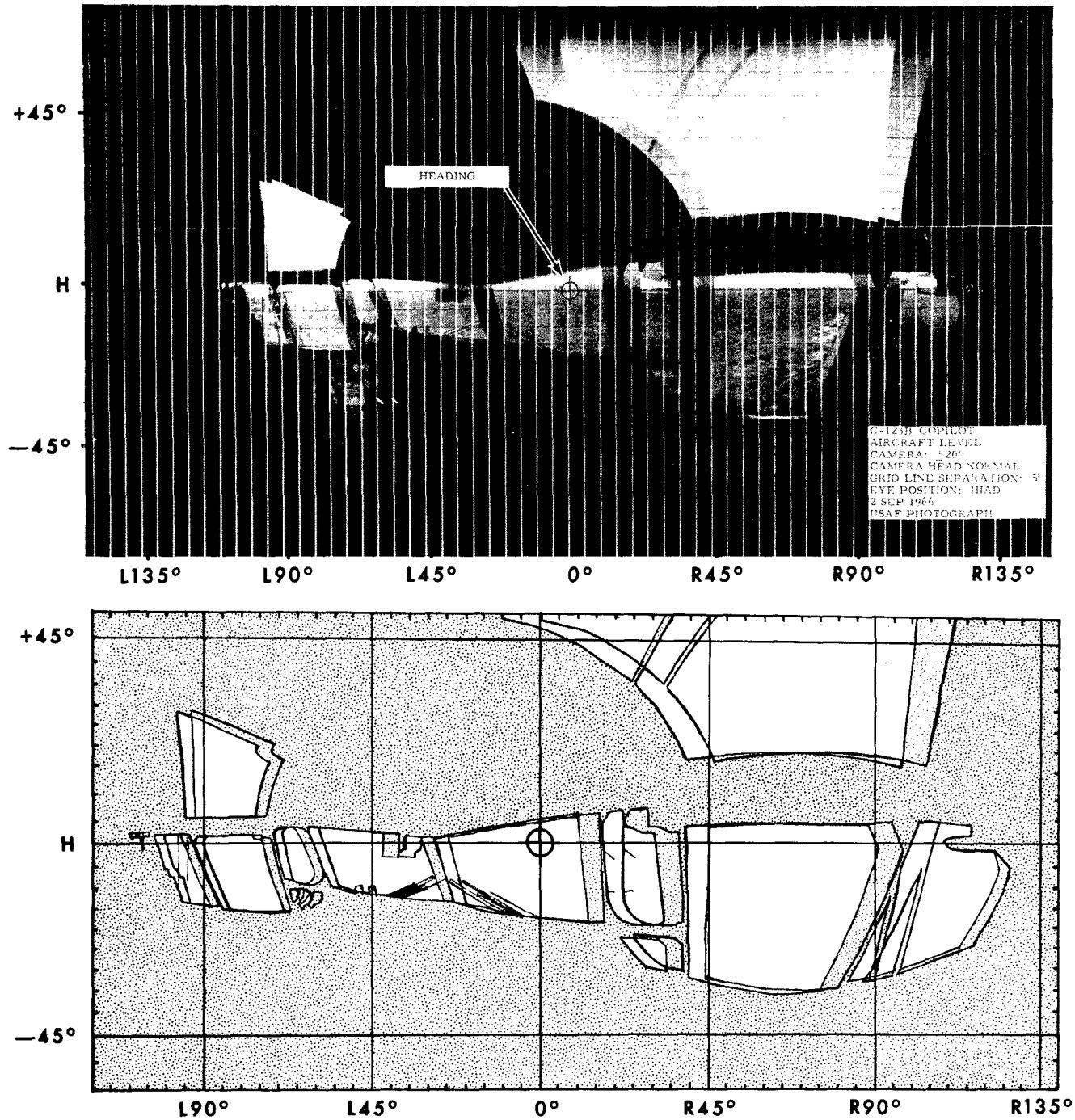
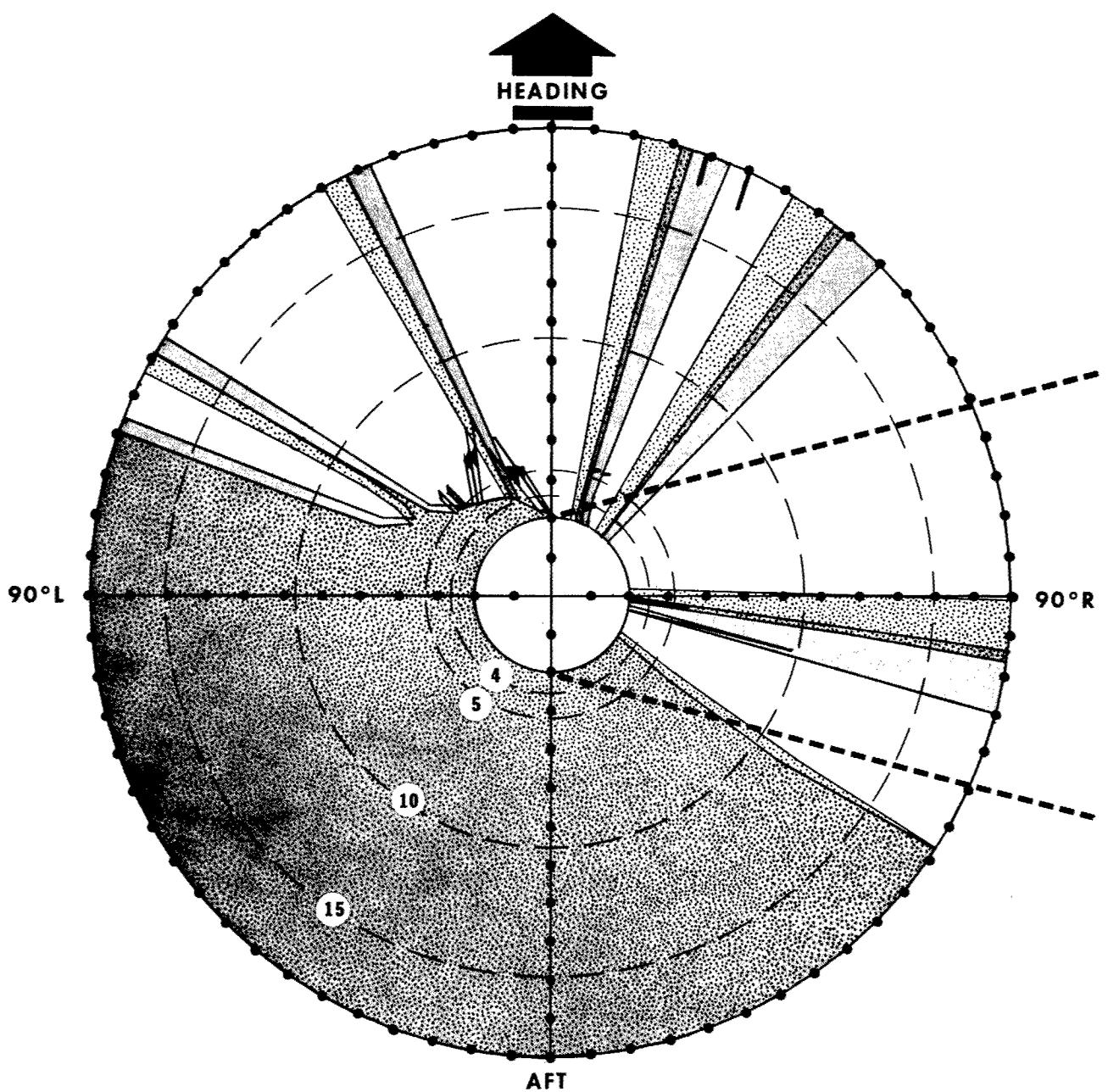
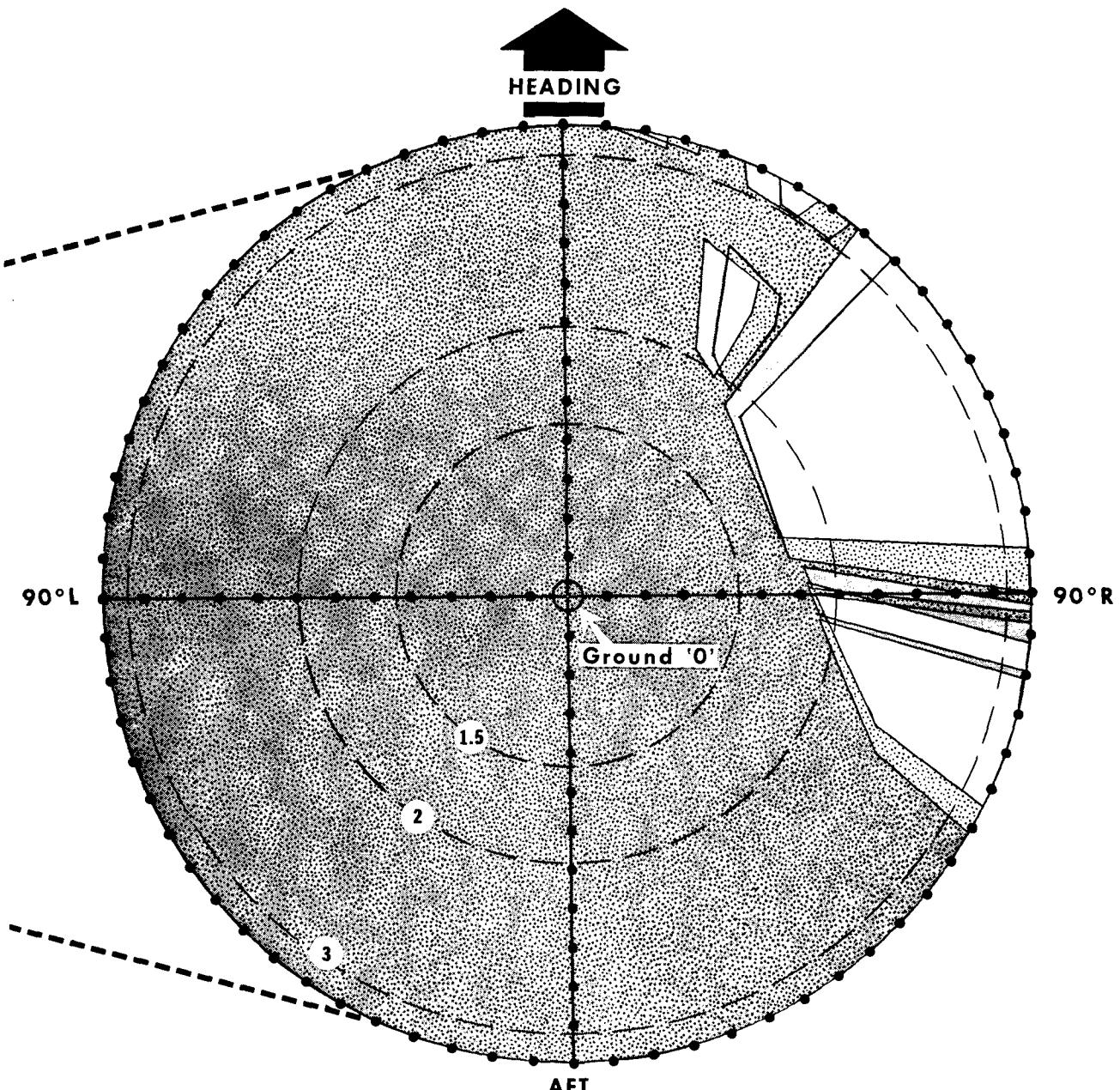


Figure 17. Binocular Cockpit Visibility Photograph and Record
- C-123B Copilot, Aircraft Level



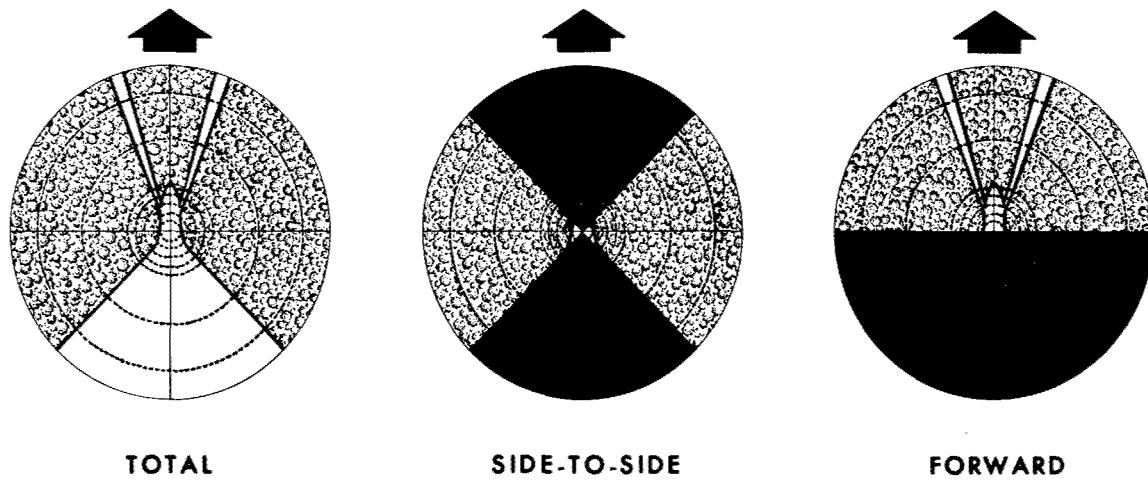
**Figure 18. Ground Visibility Plots
- C-123B Copilot , Aircraft Level**



GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

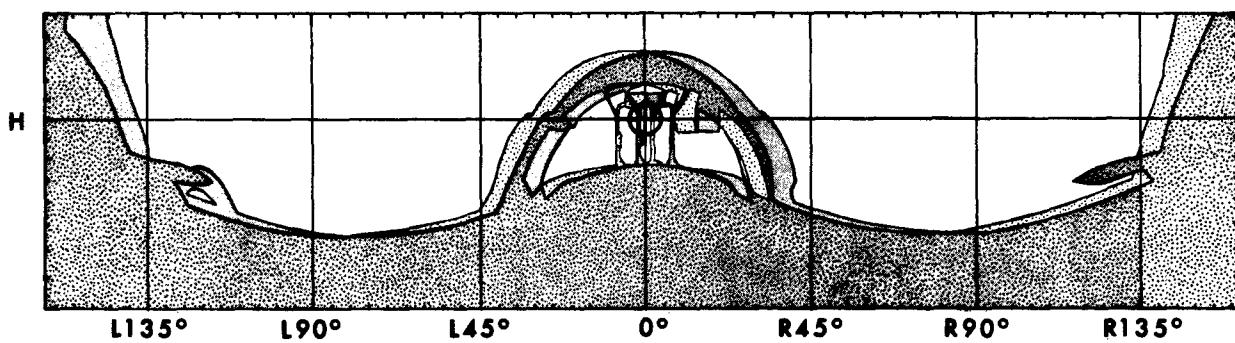
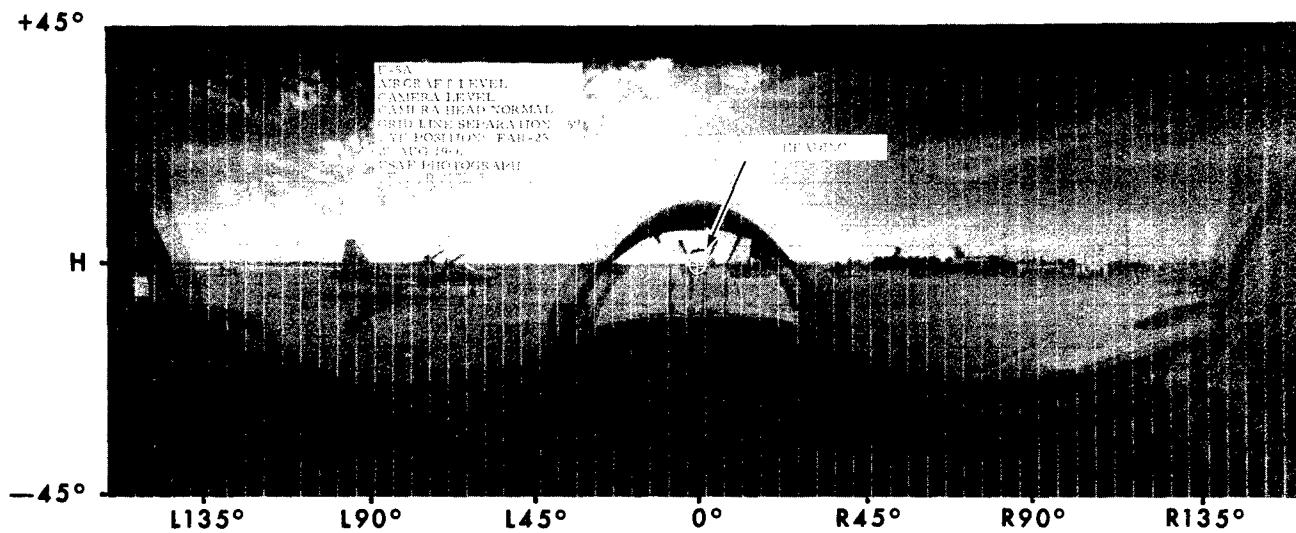
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 9. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - C-123B Copilot, Aircraft Level

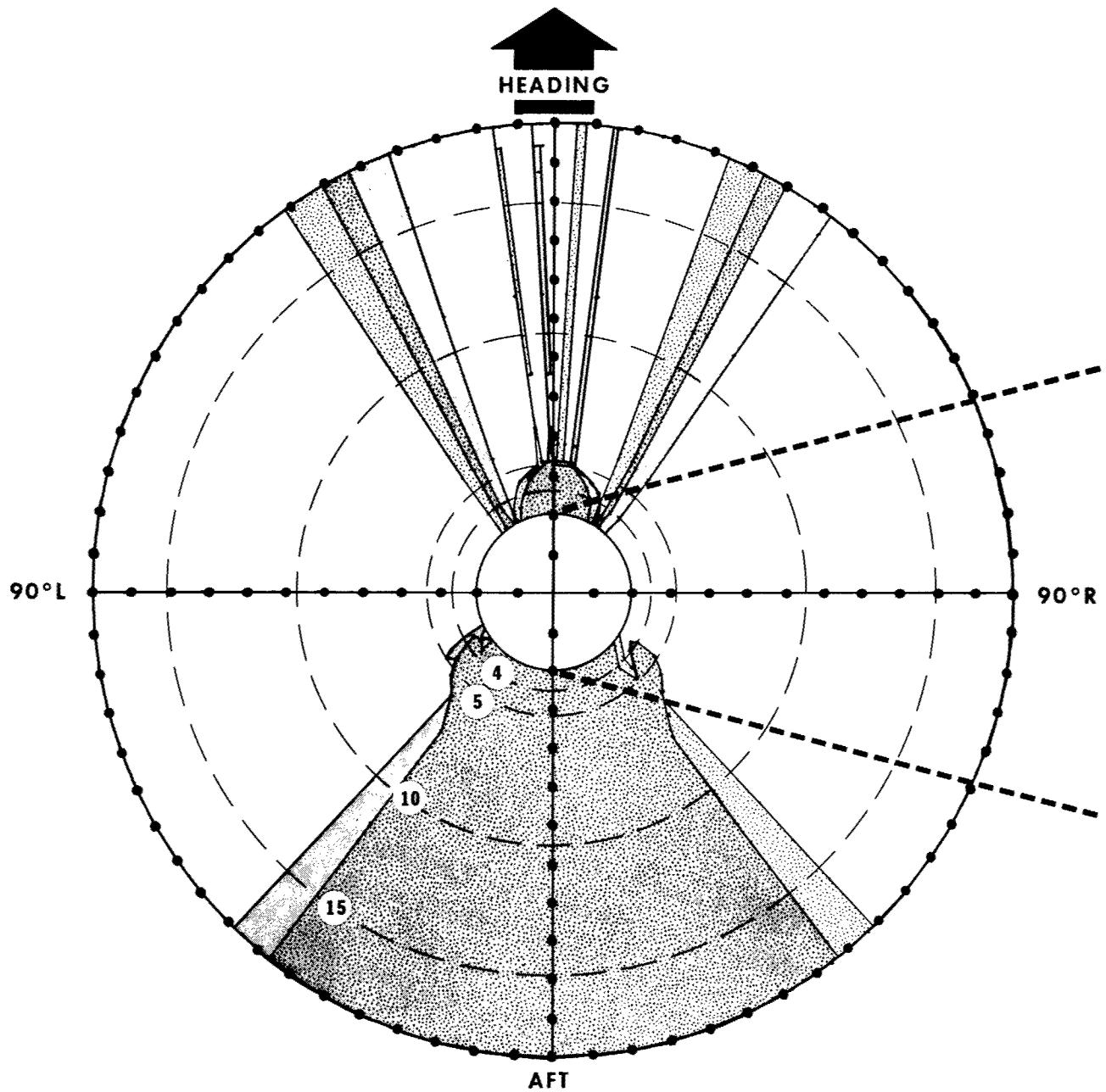


<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	43.0%	47.8%	72.3%
	Right or Left	49.5%	53.0%	84.4%
	Right and Left	36.2%	41.5%	62.6%
3 X Alt	Right	13.9%	23.3%	20.2%
	Right or Left	16.2%	26.8%	23.2%
	Right and Left	11.5%	21.3%	16.2%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	42.5%	47.5%	71.3%
10 X Alt	Right	39.1%	42.6%	64.5%
5 X Alt	Right	25.3%	30.5%	40.2%
4 X Alt	Right	19.6%	28.0%	30.4%
3 X Alt	Right	12.8%	22.6%	18.8%
2 X Alt	Right	3.4%	5.6%	6.4%
1.5 X Alt	Right	0.0%	0.0%	0.0%

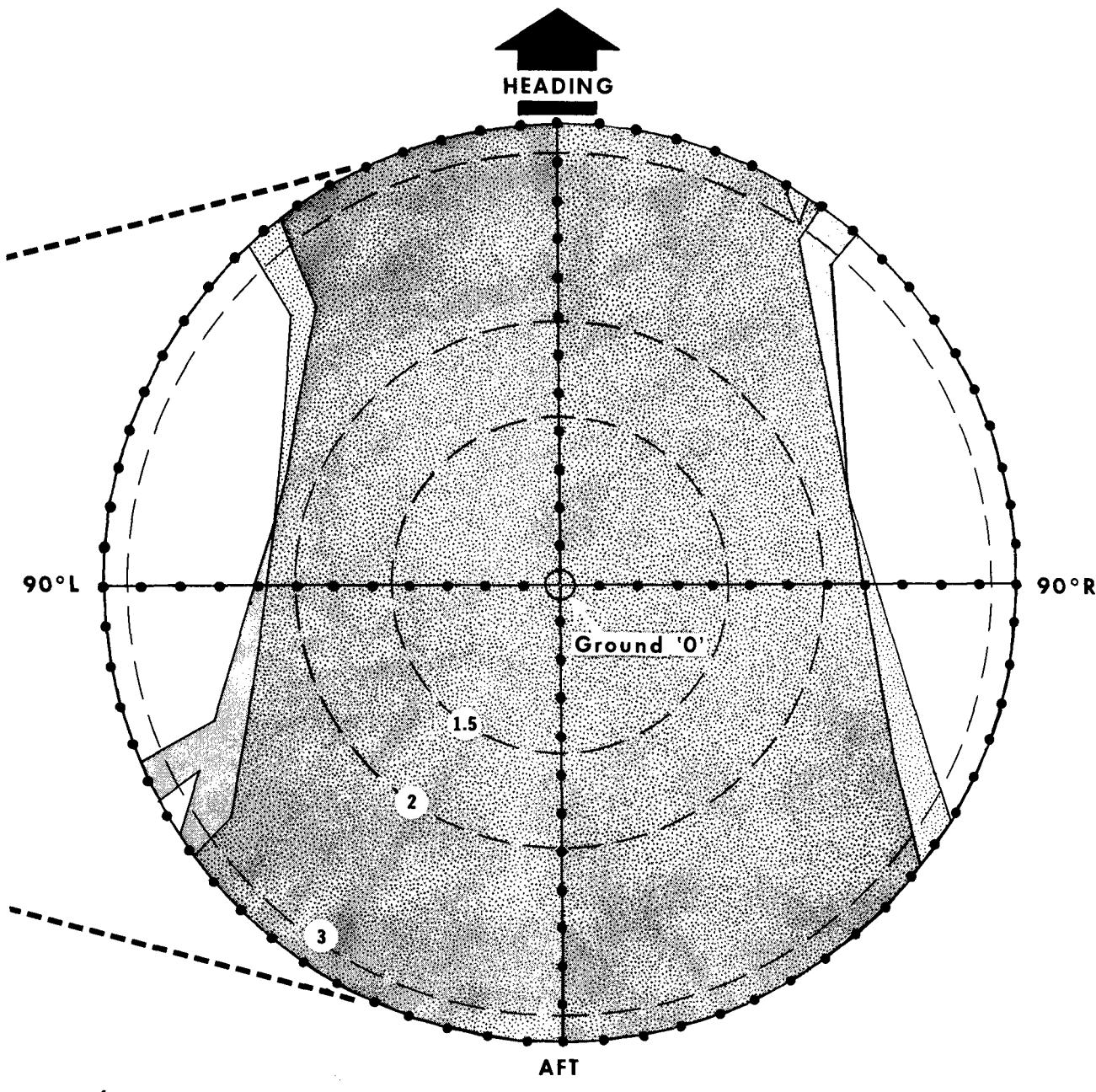
F - 5A



**Figure 19. Binocular Cockpit Visibility Photograph and Record
- F-5A, Aircraft Level**

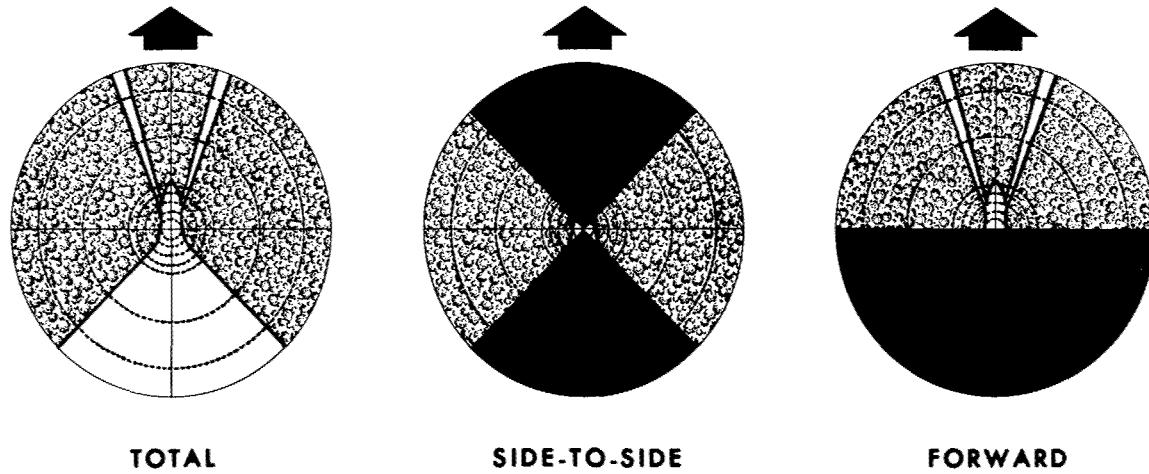


**Figure 20. Ground Visibility Plots
- F-5A, Aircraft Level**



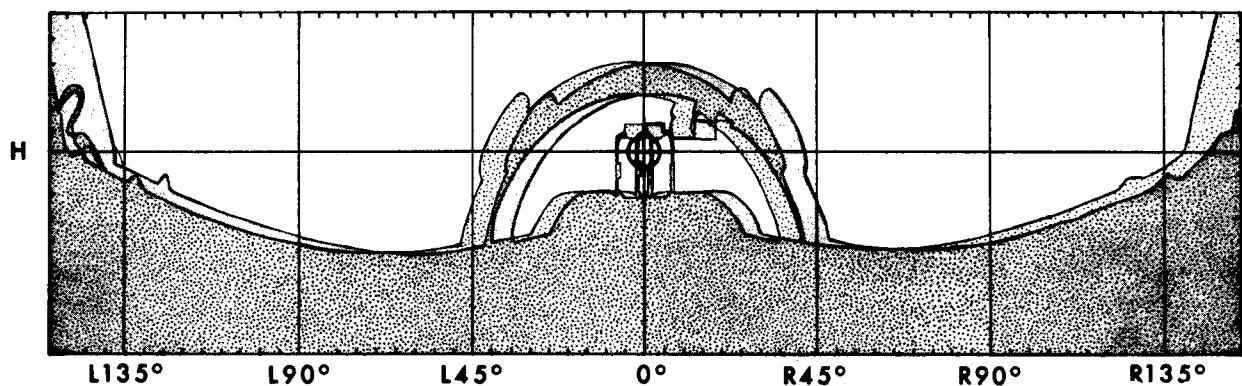
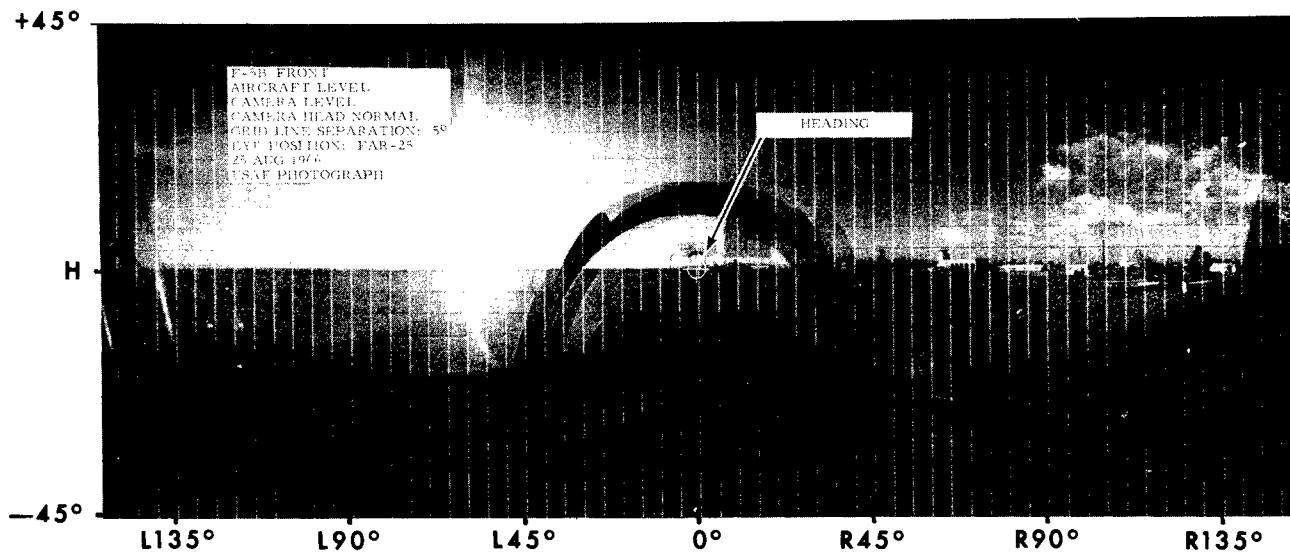
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 10. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - F-5A, Aircraft Level

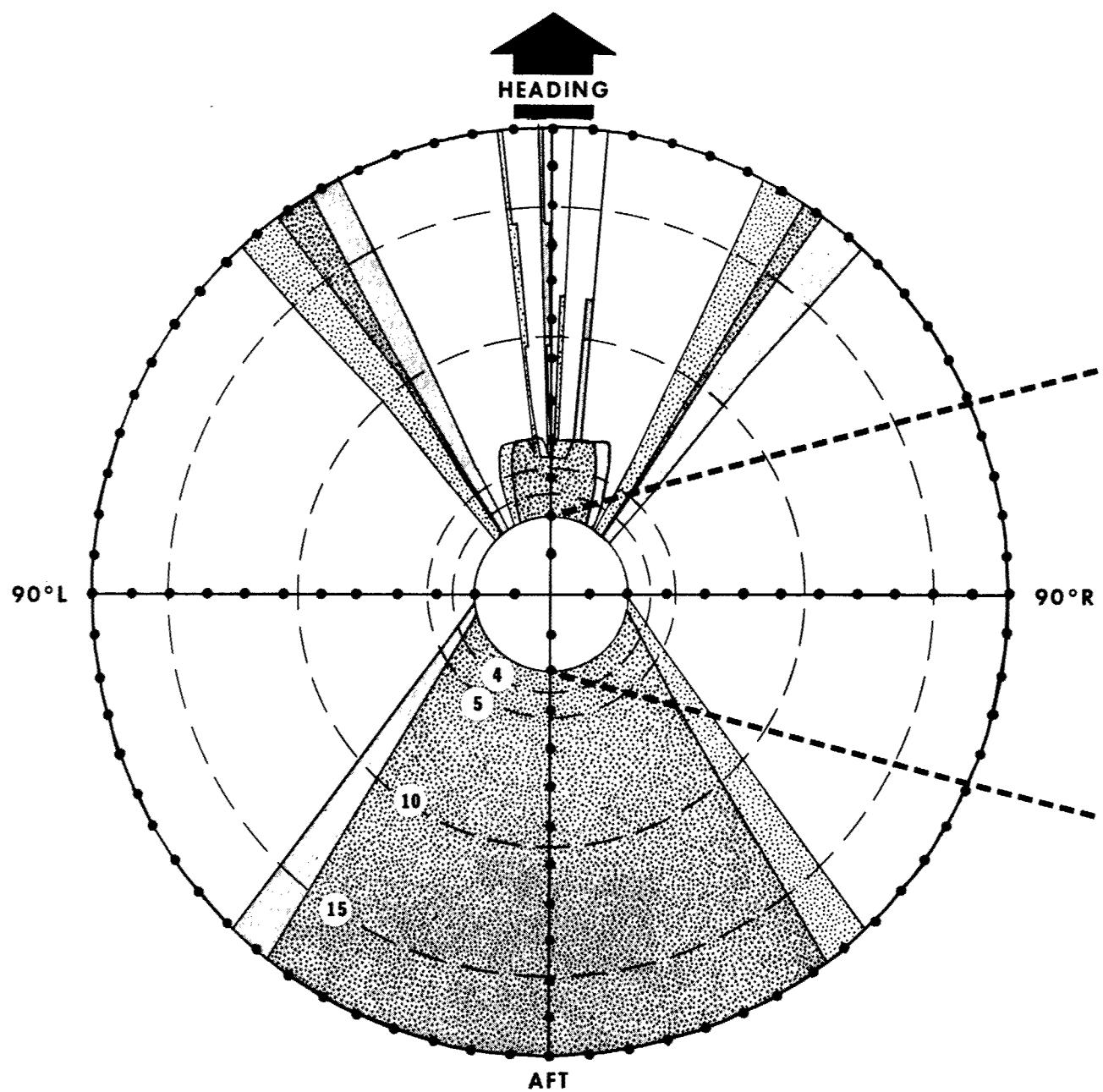


Ground Radius	Eye	Fields of View		
		Total	Side-to-Side	Forward
18 X Alt	Right	67.4%	94.3%	84.4%
	Right or Left	72.4%	94.6%	91.2%
	Right and Left	62.1%	93.7%	76.9%
3 X Alt	Right	20.8%	39.1%	27.0%
	Right or Left	22.9%	42.3%	28.9%
	Right and Left	18.4%	35.2%	25.4%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	68.0%	96.5%	85.3%
10 X Alt	Right	64.5%	92.9%	81.5%
5 X Alt	Right	41.1%	70.4%	54.3%
4 X Alt	Right	33.4%	60.8%	42.2%
3 X Alt	Right	18.8%	36.2%	24.8%
2 X Alt	Right	0.0%	0.0%	0.0%
1.5 X Alt	Right	0.0%	0.0%	0.0%

F-5B Front



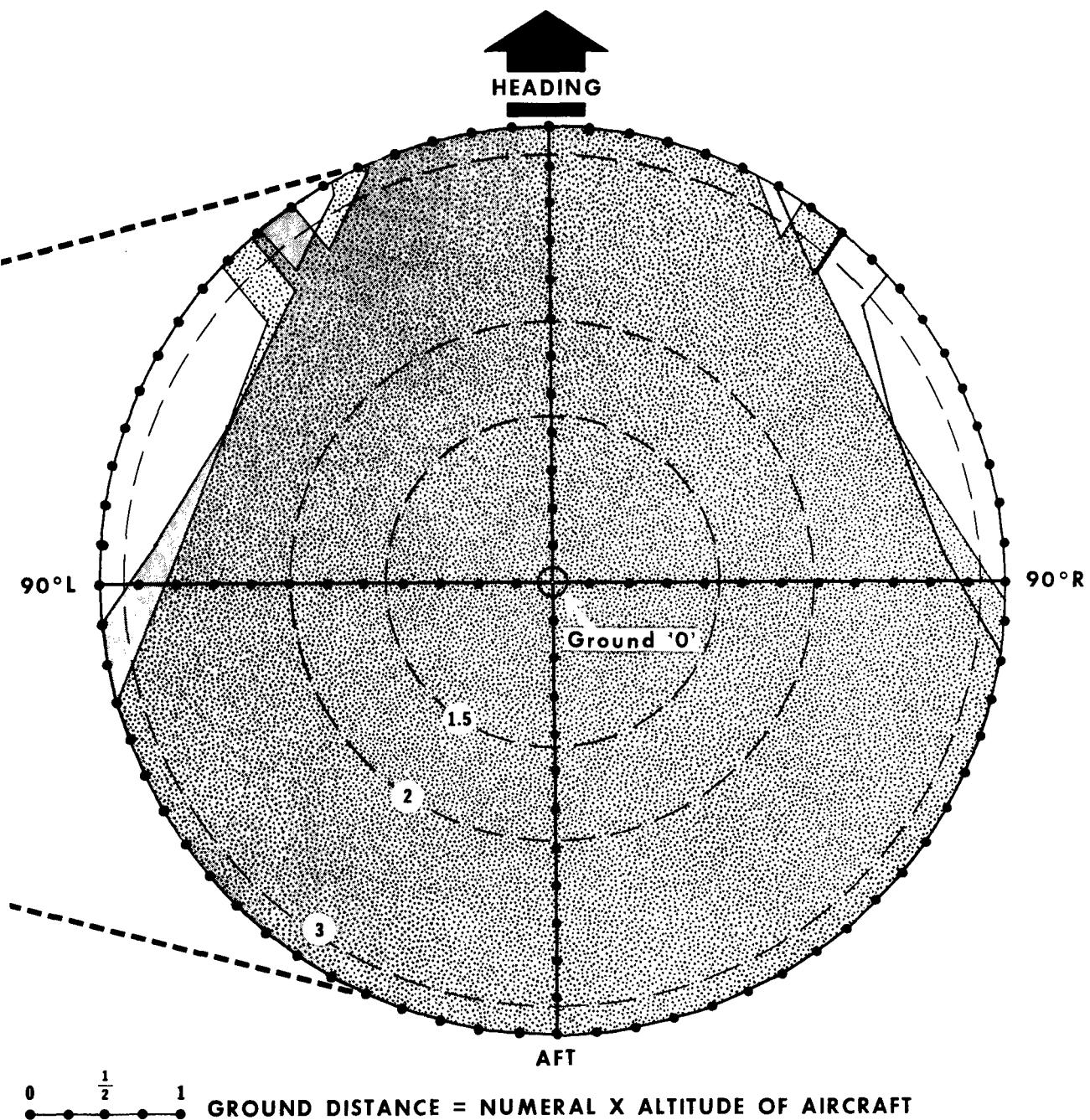
**Figure 21. Binocular Cockpit Visibility Photograph and Record
- F-5B Front, Aircraft Level**



SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

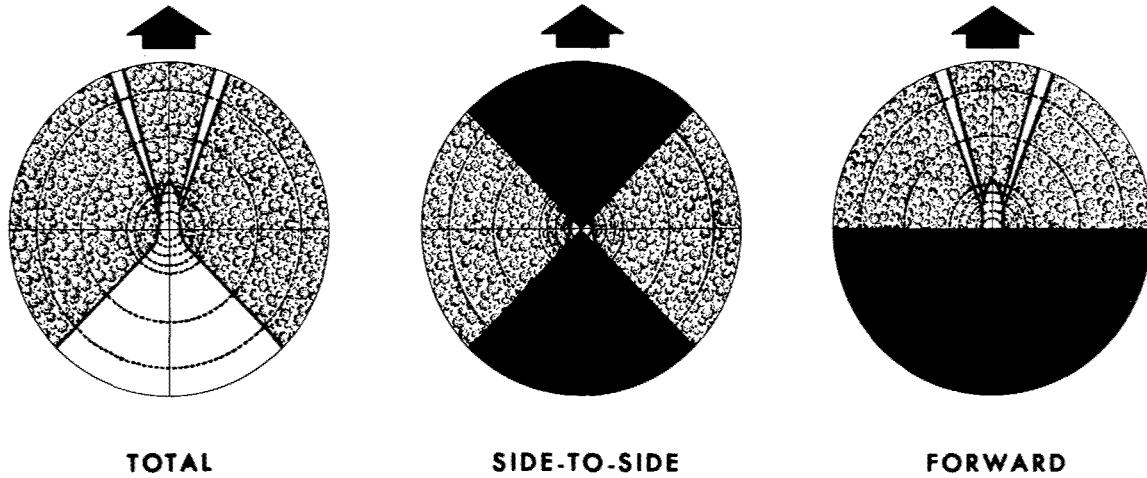
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 22. Ground Visibility Plots
- F-5B Front, Aircraft Level**



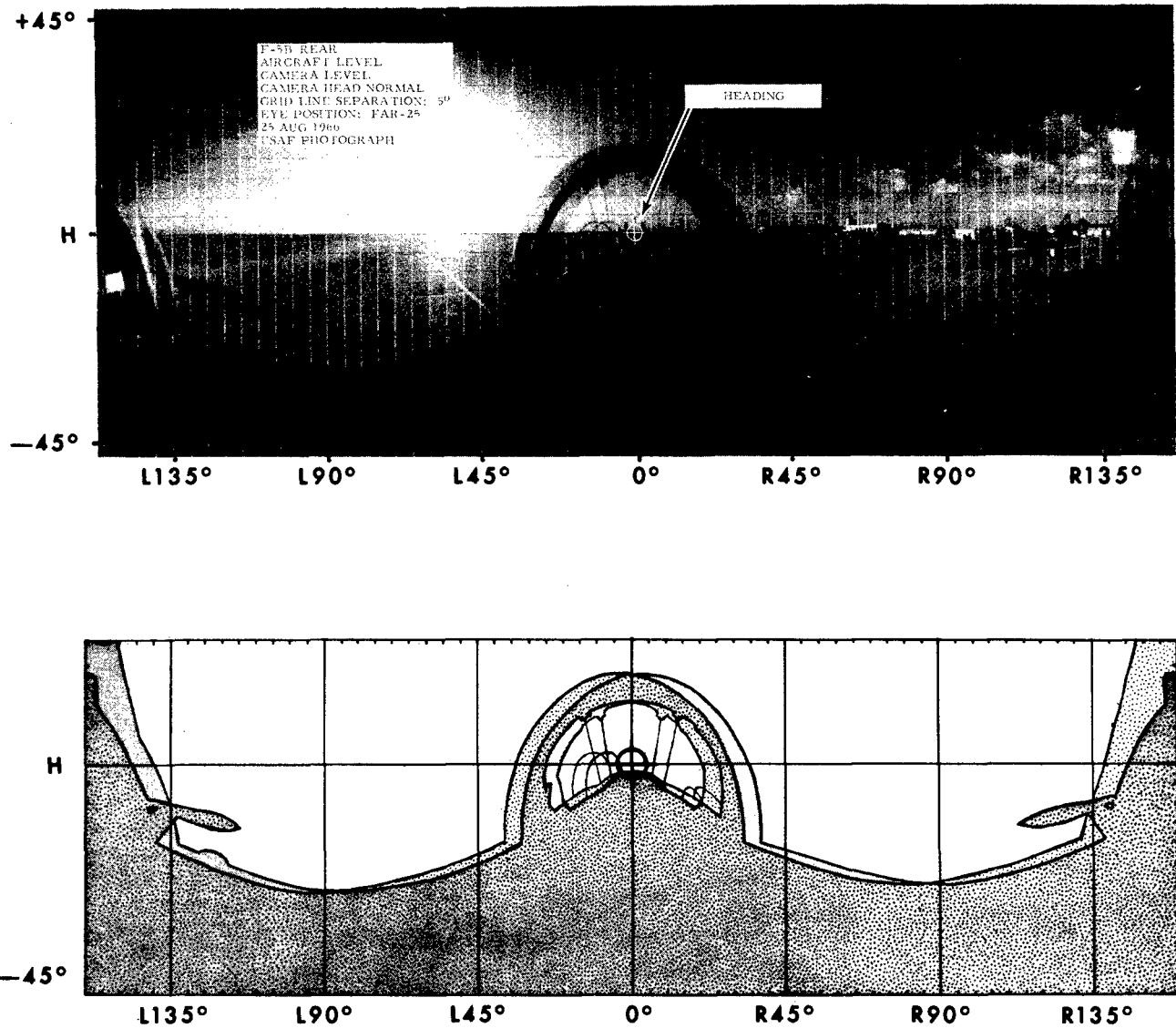
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 11. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - F-5B Front, Aircraft Level

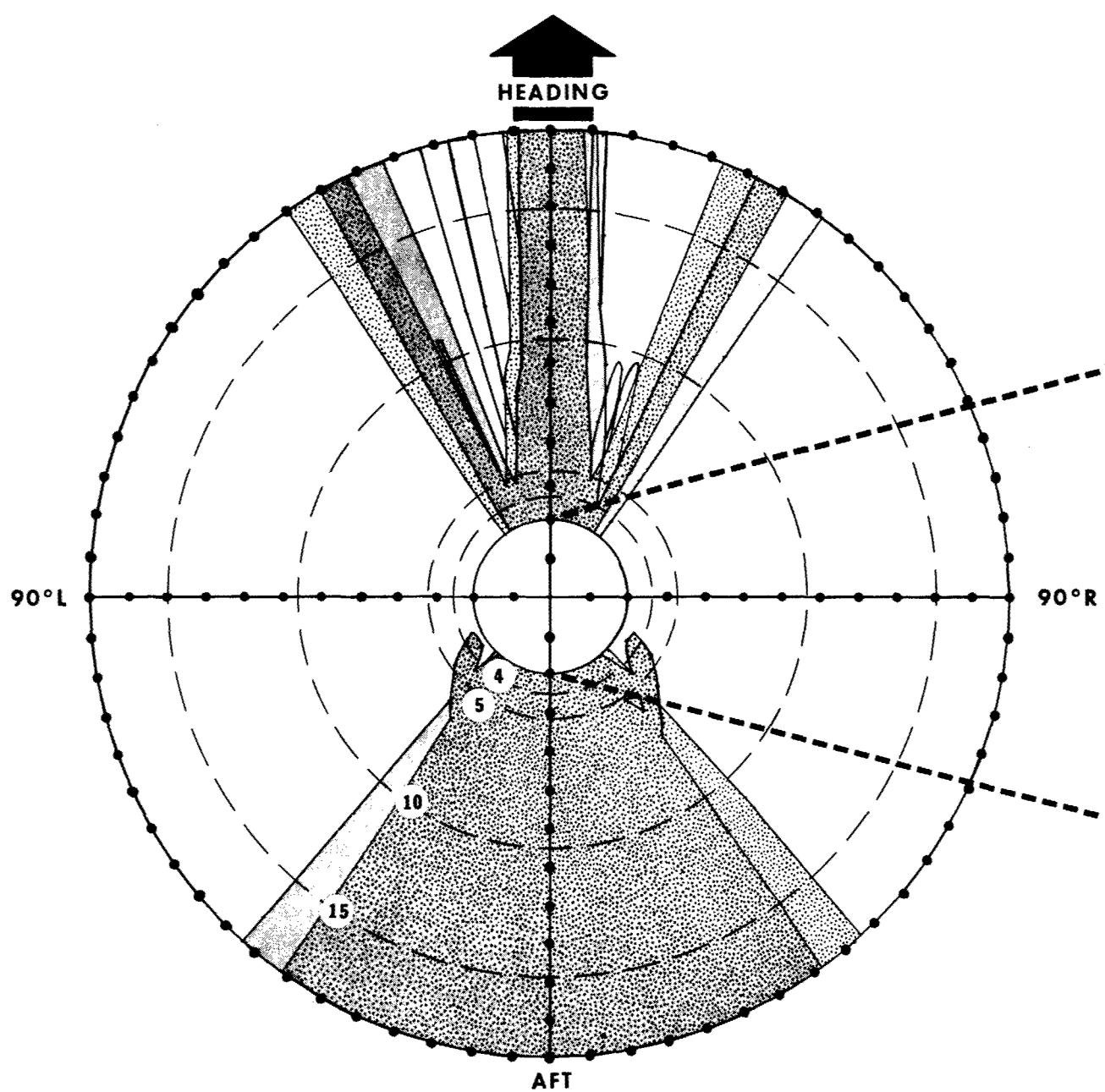


<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	64.9%	91.2%	83.7%
	Right or Left	70.5%	92.6%	91.1%
	Right and Left	59.9%	89.7%	76.6%
3 X Alt	Right	8.5%	15.1%	15.6%
	Right or Left	10.2%	16.9%	18.7%
	Right and Left	6.4%	12.2%	12.7%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	63.3%	89.3%	82.6%
10 X Alt	Right	56.0%	81.6%	75.8%
5 X Alt	Right	29.3%	51.7%	46.1%
4 X Alt	Right	21.4%	38.3%	35.4%
3 X Alt	Right	5.8%	10.8%	10.8%
2 X Alt	Right	0.0%	0.0%	0.0%
1.5 X Alt	Right	0.0%	0.0%	0.0%

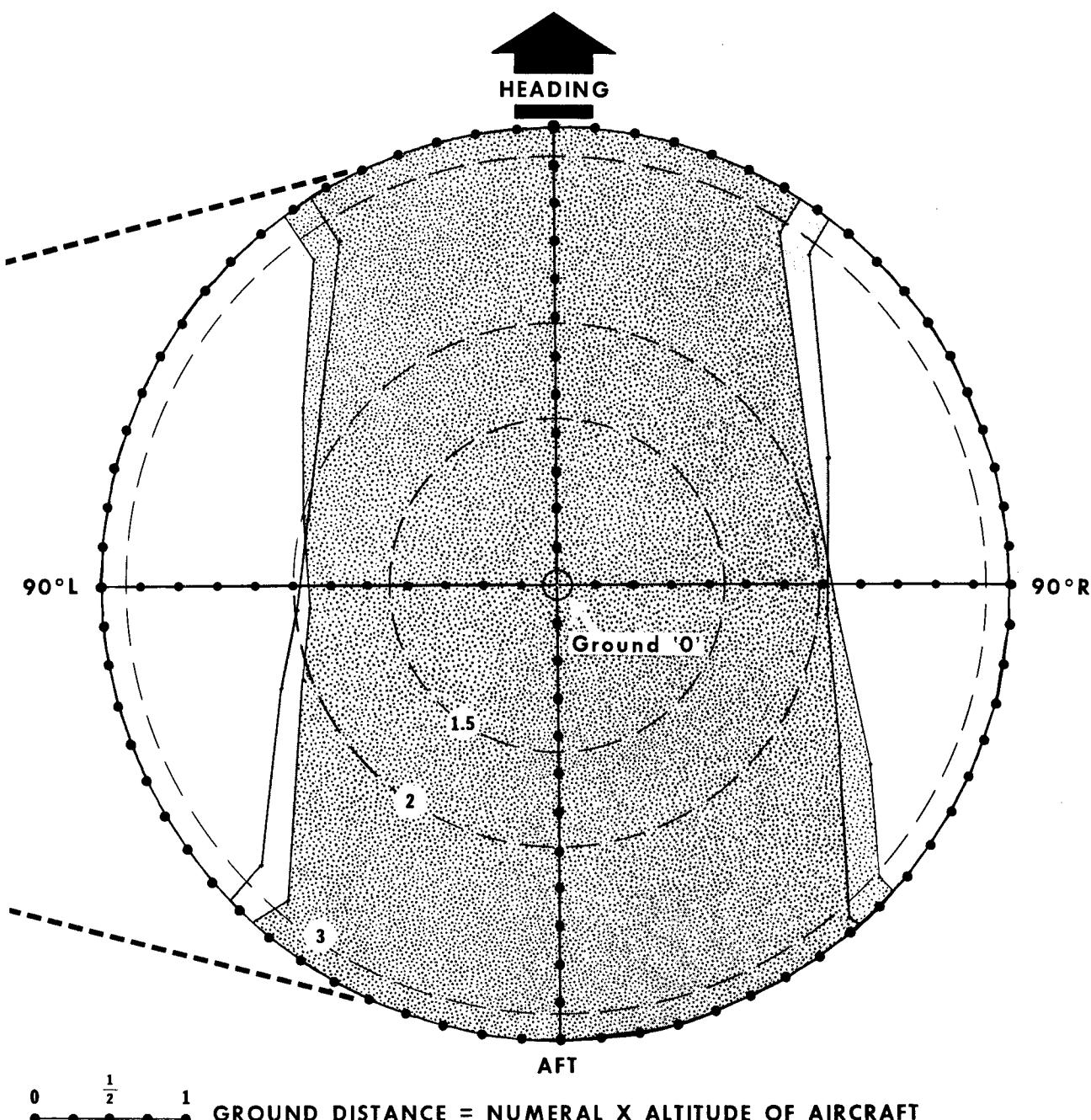
F-5B Rear



**Figure 23. Binocular Cockpit Visibility Photograph and Record
- F-5B Rear, Aircraft Level**

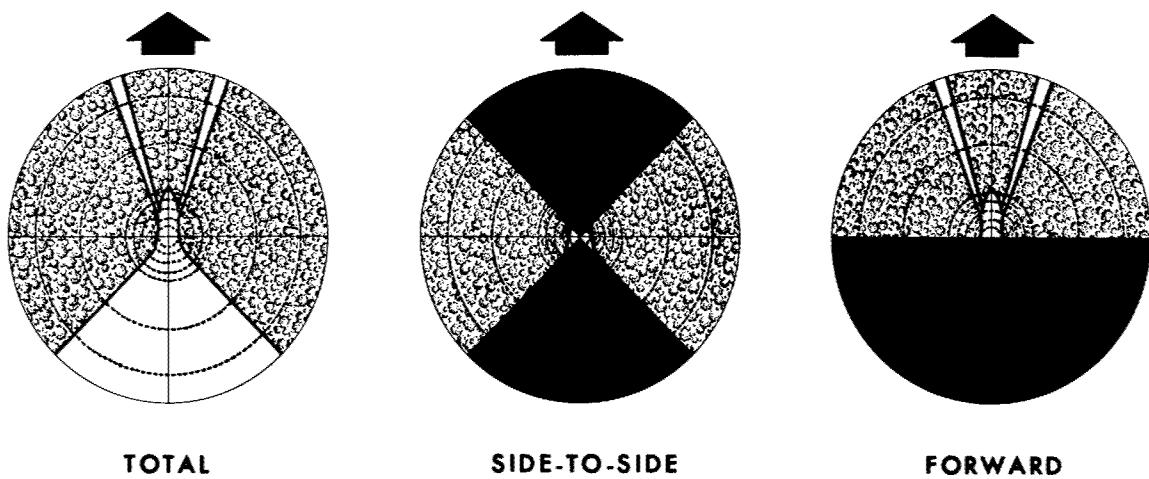


**Figure 24. Ground Visibility Plots
- F-5B Rear, Aircraft Level**



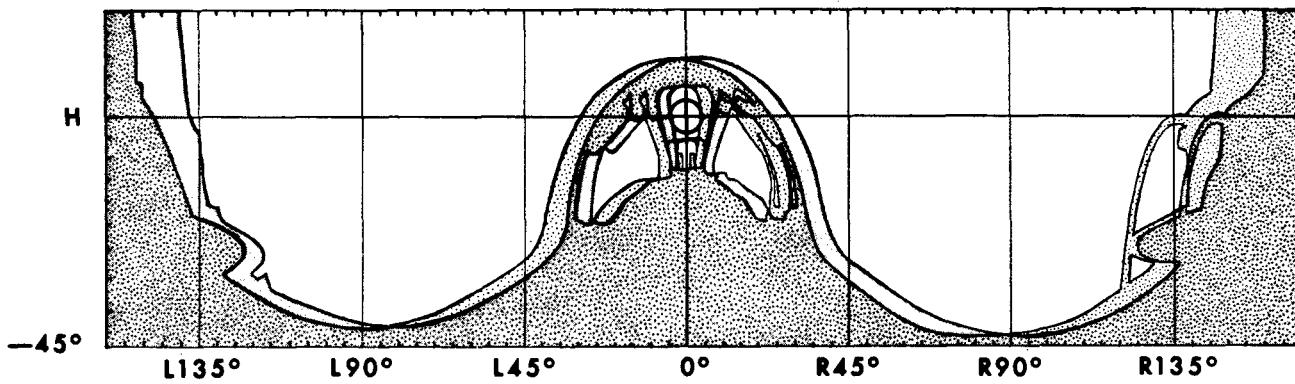
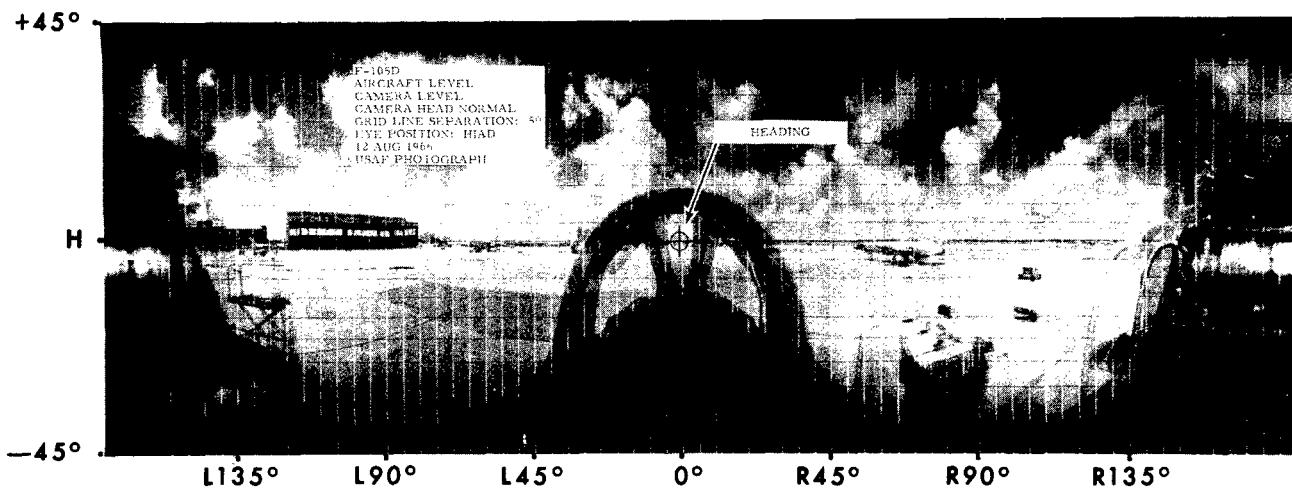
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 12. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - F-5B Rear, Aircraft Level

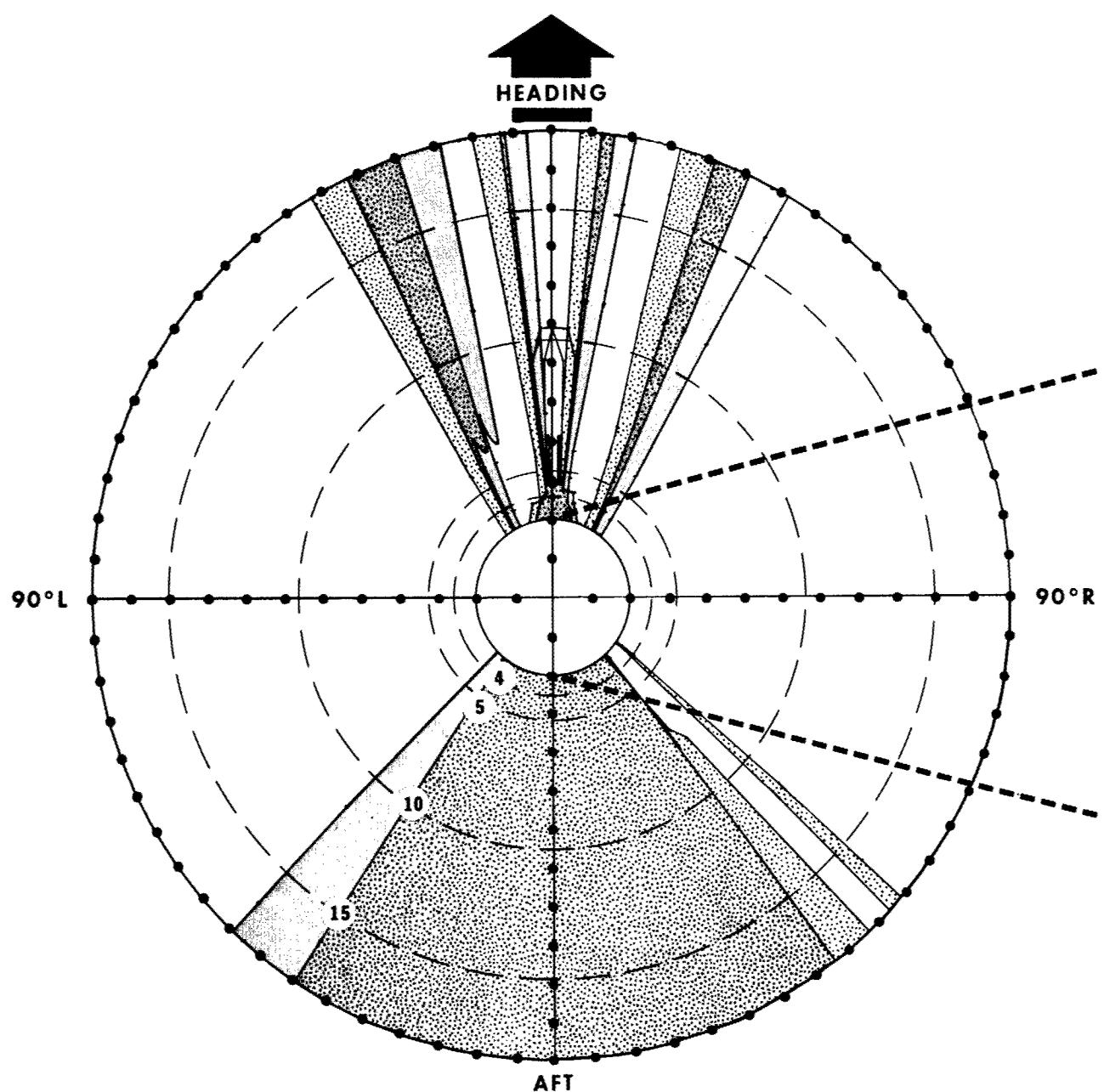


<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	64.2%	94.8%	76.2%
	Right or Left	66.5%	94.9%	77.3%
	Right and Left	59.5%	94.7%	69.6%
3 X Alt	Right	29.0%	53.0%	33.0%
	Right or Left	31.3%	56.0%	35.1%
	Right and Left	26.8%	49.7%	30.9%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	62.6%	95.4%	73.8%
10 X Alt	Right	56.8%	91.0%	66.4%
5 X Alt	Right	40.2%	74.2%	48.6%
4 X Alt	Right	38.4%	70.6%	45.6%
3 X Alt	Right	26.3%	49.7%	30.0%
2 X Alt	Right	0.5%	1.2%	0.6%
1.5 X Alt	Right	0.0%	0.0%	0.0%

F-105D



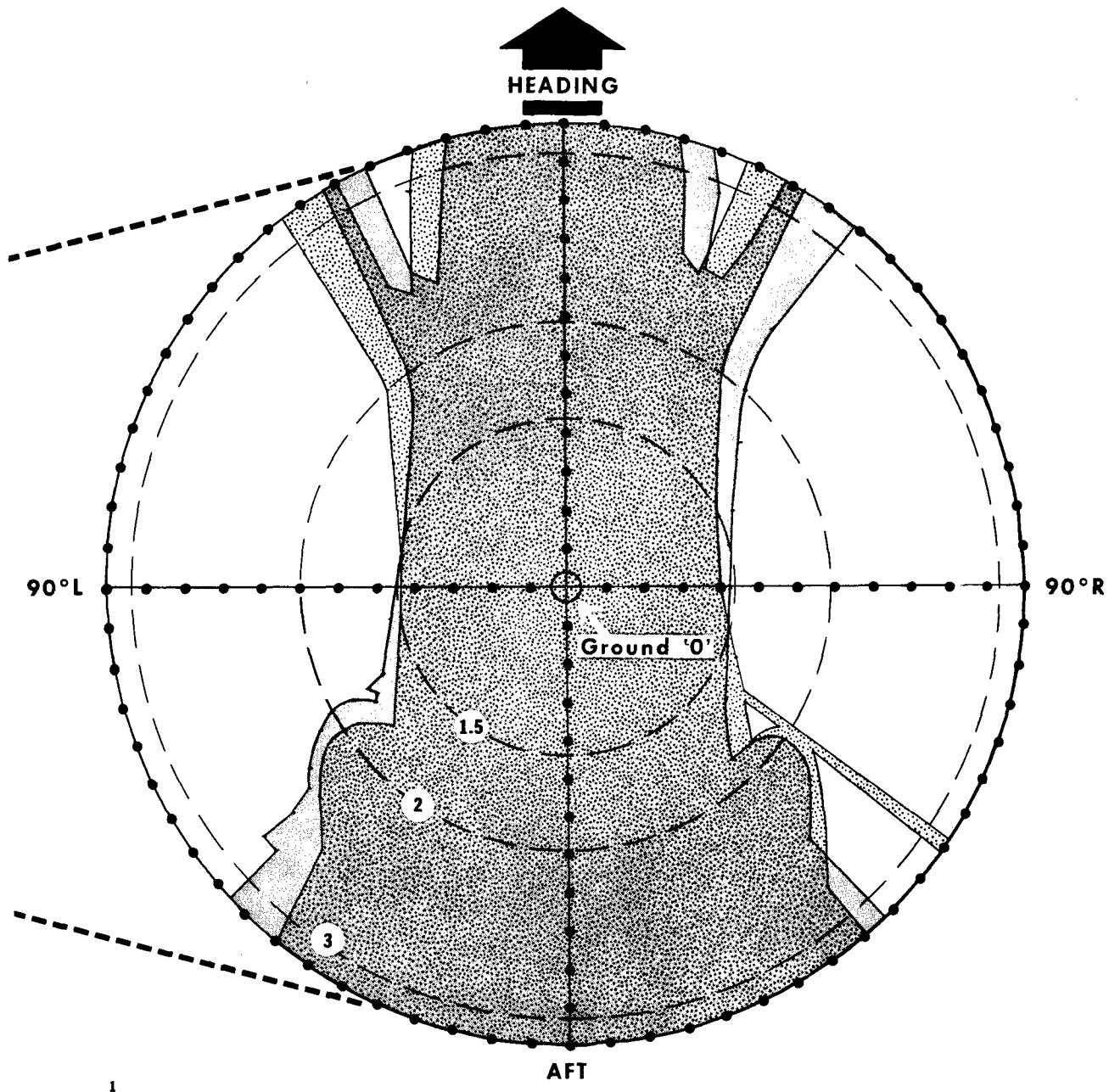
**Figure 25. Binocular Cockpit Visibility Photograph and Record
- F-105D, Aircraft Level**



**SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT**

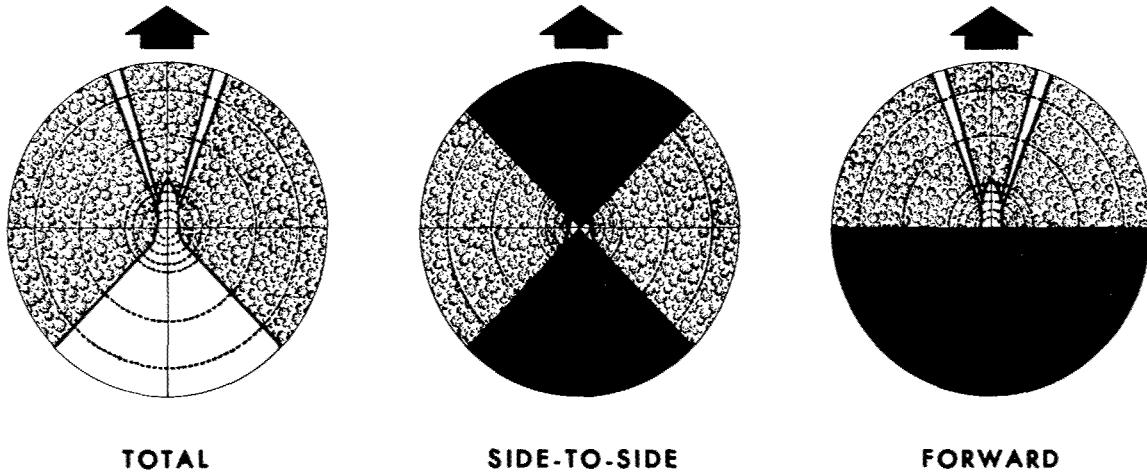
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 26. Ground Visibility Plots
- F-105D, Aircraft Level**



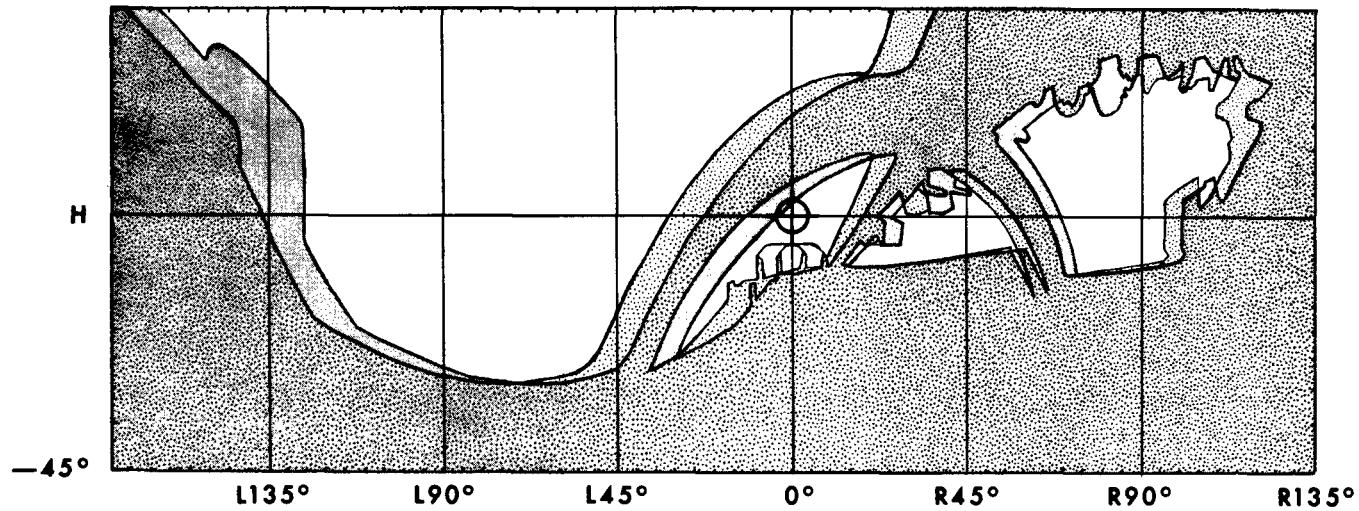
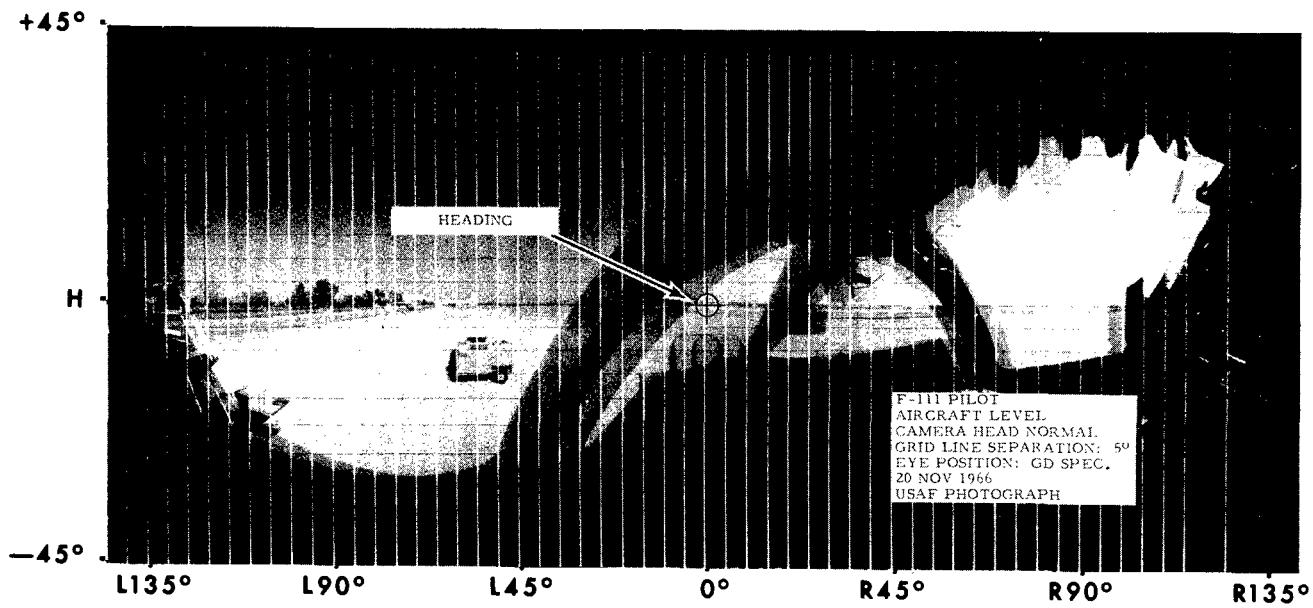
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 13. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - F-105D, Aircraft Level

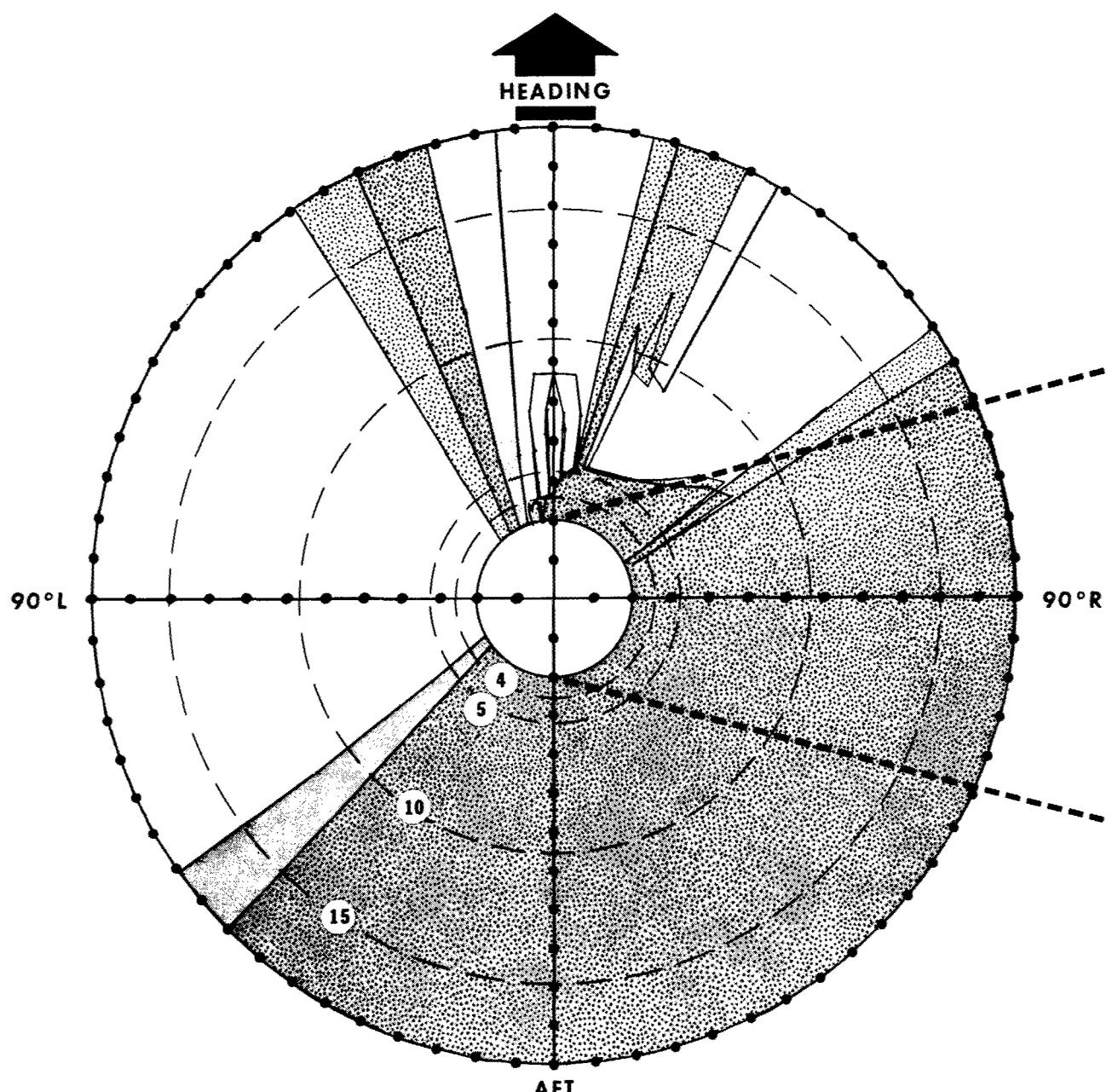


Ground Radius	Eye	Fields of View		
		Total	Side-to-Side	Forward
18 X Alt	Right	67.8%	95.0%	82.3%
	Right or Left	73.7%	96.4%	90.8%
	Right and Left	60.2%	94.9%	72.2%
3 X Alt	Right	44.6%	76.5%	50.9%
	Right or Left	47.9%	78.9%	56.4%
	Right and Left	40.3%	73.3%	46.3%
<hr/>				
Slant Range				
15 X Alt	Right	67.6%	96.3%	81.6%
10 X Alt	Right	66.6%	94.7%	80.5%
5 X Alt	Right	62.6%	88.0%	70.2%
4 X Alt	Right	53.6%	84.2%	61.3%
3 X Alt	Right	43.0%	75.5%	49.4%
2 X Alt	Right	23.4%	44.9%	26.2%
1.5 X Alt	Right	2.0%	3.6%	2.0%

F-111A Pilot



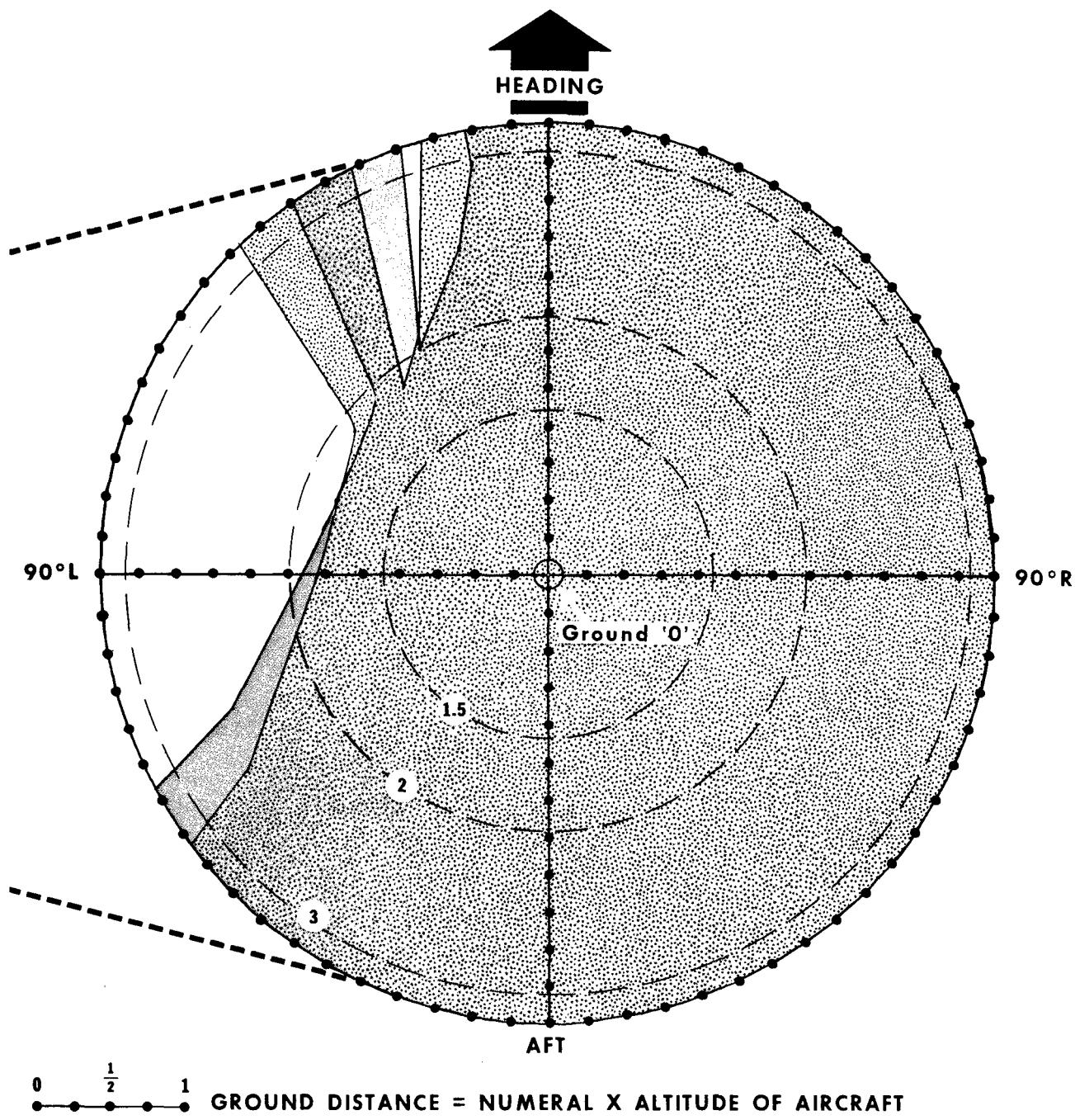
**Figure 27. Binocular Cockpit Visibility Photograph and Record
- F-111A Pilot, Aircraft Level**



SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

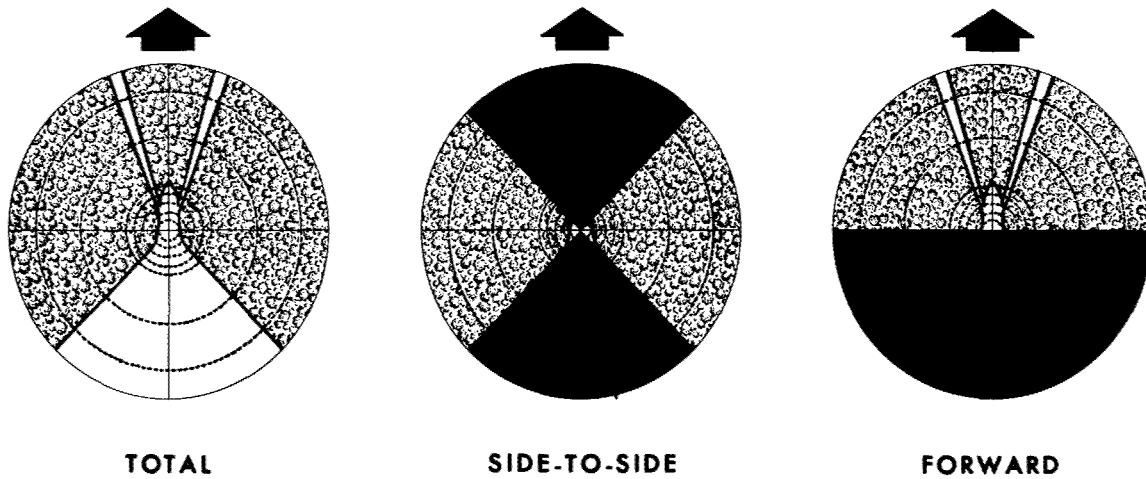
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 28. Ground Visibility Plots
- F-111 Pilot, Aircraft Level**



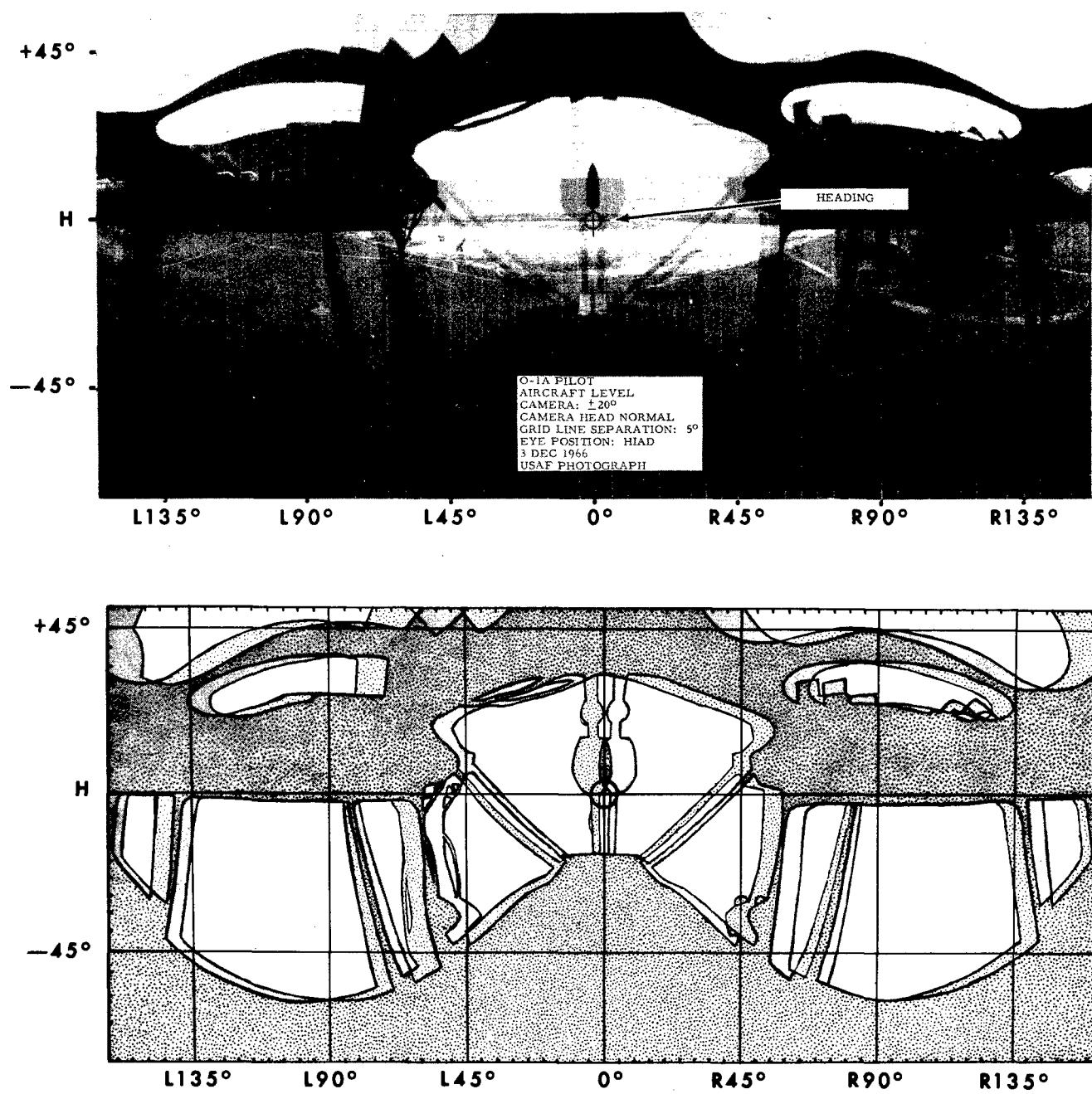
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 14. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - F-111 Pilot, Aircraft Level

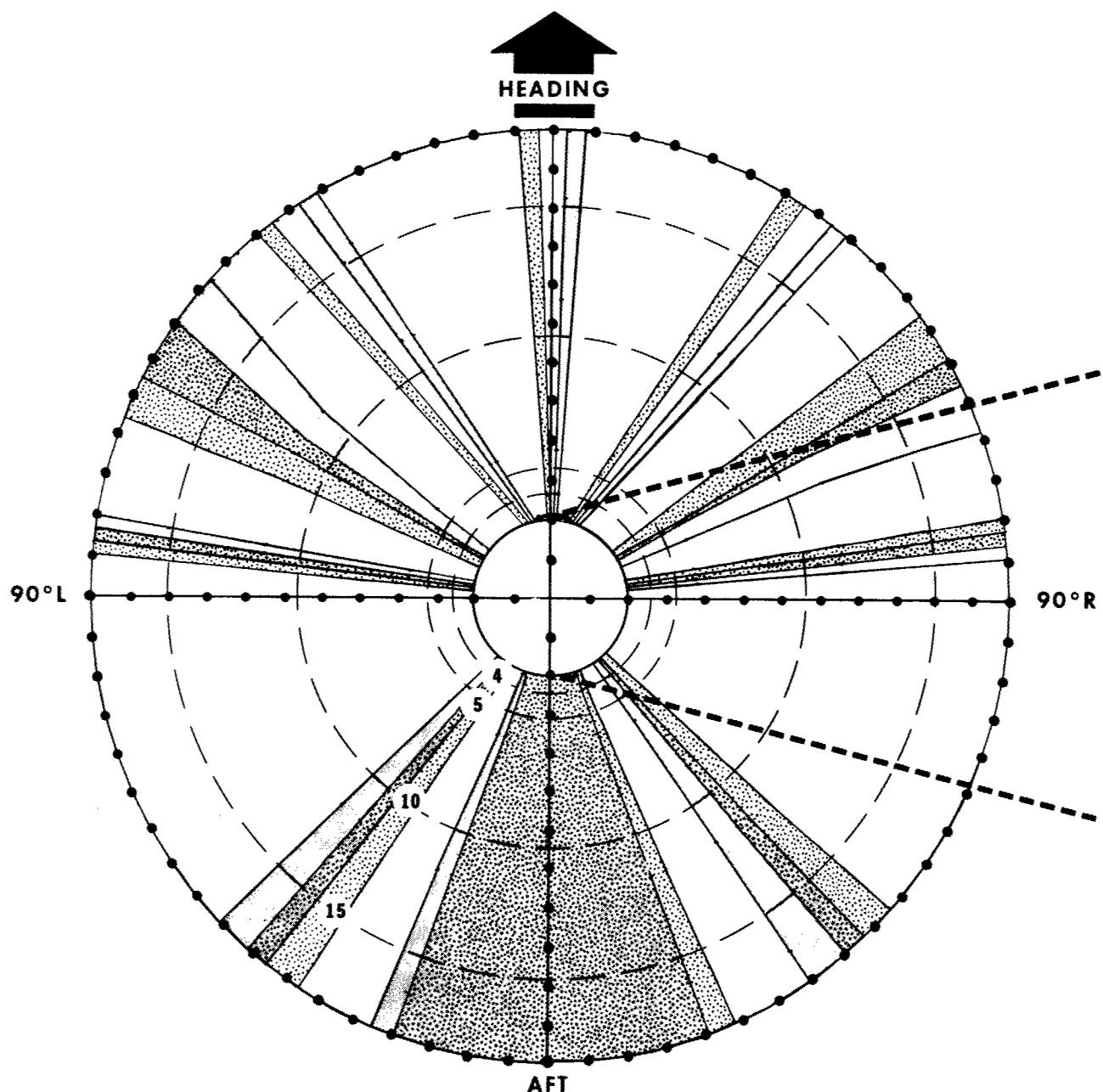


<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	41.9%	52.1%	60.4%
	Right or Left	46.2%	54.3%	69.1%
	Right and Left	36.1%	47.6%	53.4%
3 X Alt	Right	15.8%	27.9%	20.4%
	Right or Left	18.7%	28.9%	26.1%
	Right and Left	12.9%	24.4%	17.8%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	41.5%	52.4%	61.3%
10 X Alt	Right	38.5%	48.8%	45.2%
5 X Alt	Right	24.0%	39.4%	29.3%
4 X Alt	Right	19.8%	36.4%	25.8%
3 X Alt	Right	14.9%	26.6%	19.3%
2 X Alt	Right	2.9%	5.5%	5.0%
1.5 X Alt	Right	0.0%	0.0%	0.0%

O-1A Pilot



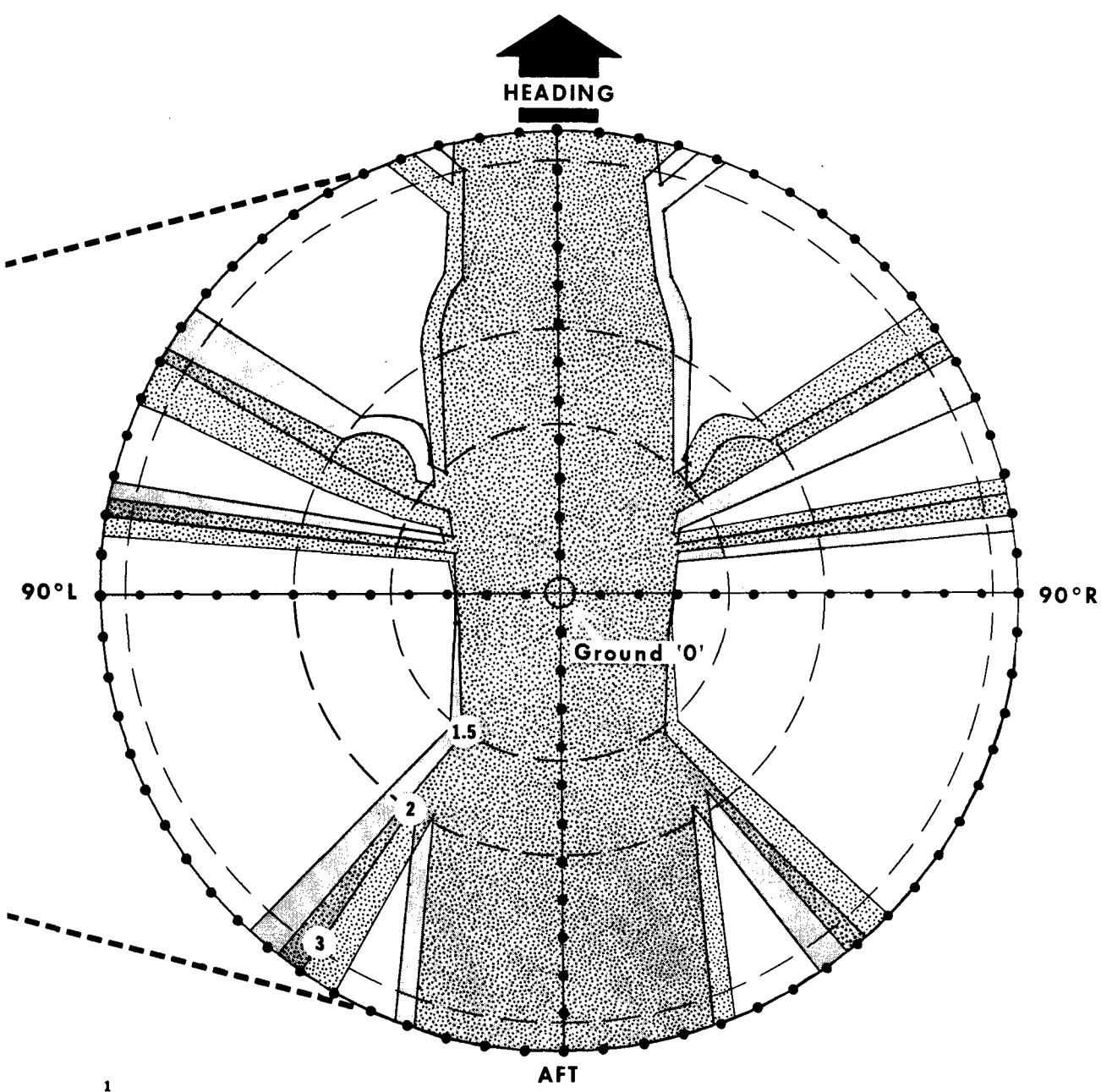
**Figure 29. Binocular Cockpit Visibility Photograph and Record
- O-1A Pilot, Aircraft Level**



**SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT**

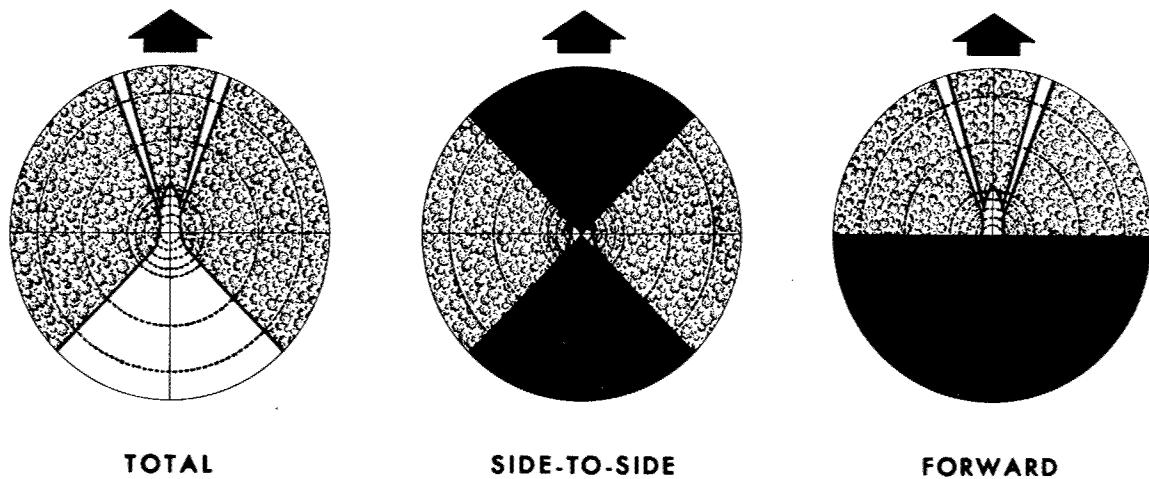
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 30. Ground Visibility Plots
- O-1A Pilot, Aircraft Level**



OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 15. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - O-1A Pilot, Aircraft Level



Ground Radius	Eye	Fields of View		
		Total	Side-to-Side	Forward
18 X Alt	Right	71.9%	76.0%	78.2%
	Right or Left	81.7%	84.8%	90.4%
	Right and Left	62.1%	67.6%	65.6%
3 X Alt	Right	53.4%	78.4%	51.0%
	Right or Left	61.1%	87.8%	60.8%
	Right and Left	47.0%	71.0%	43.1%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	72.9%	83.1%	77.0%
10 X Alt	Right	72.2%	82.5%	76.9%
5 X Alt	Right	64.6%	77.4%	69.1%
4 X Alt	Right	61.8%	76.1%	60.6%
3 X Alt	Right	52.5%	74.4%	49.7%
2 X Alt	Right	34.4%	57.8%	25.5%
1.5 X Alt	Right	18.8%	36.0%	11.4%

O-2 Pilot

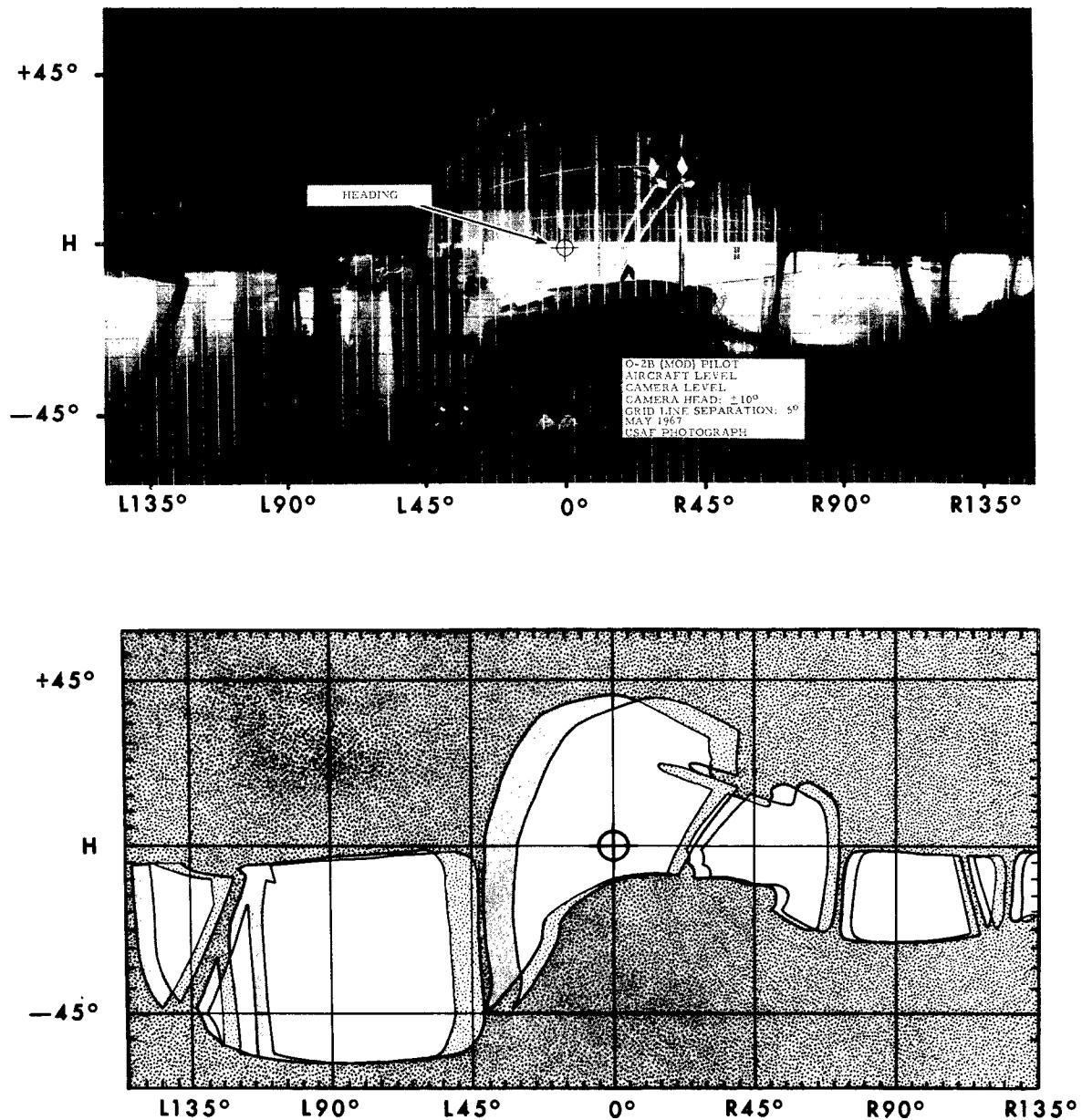
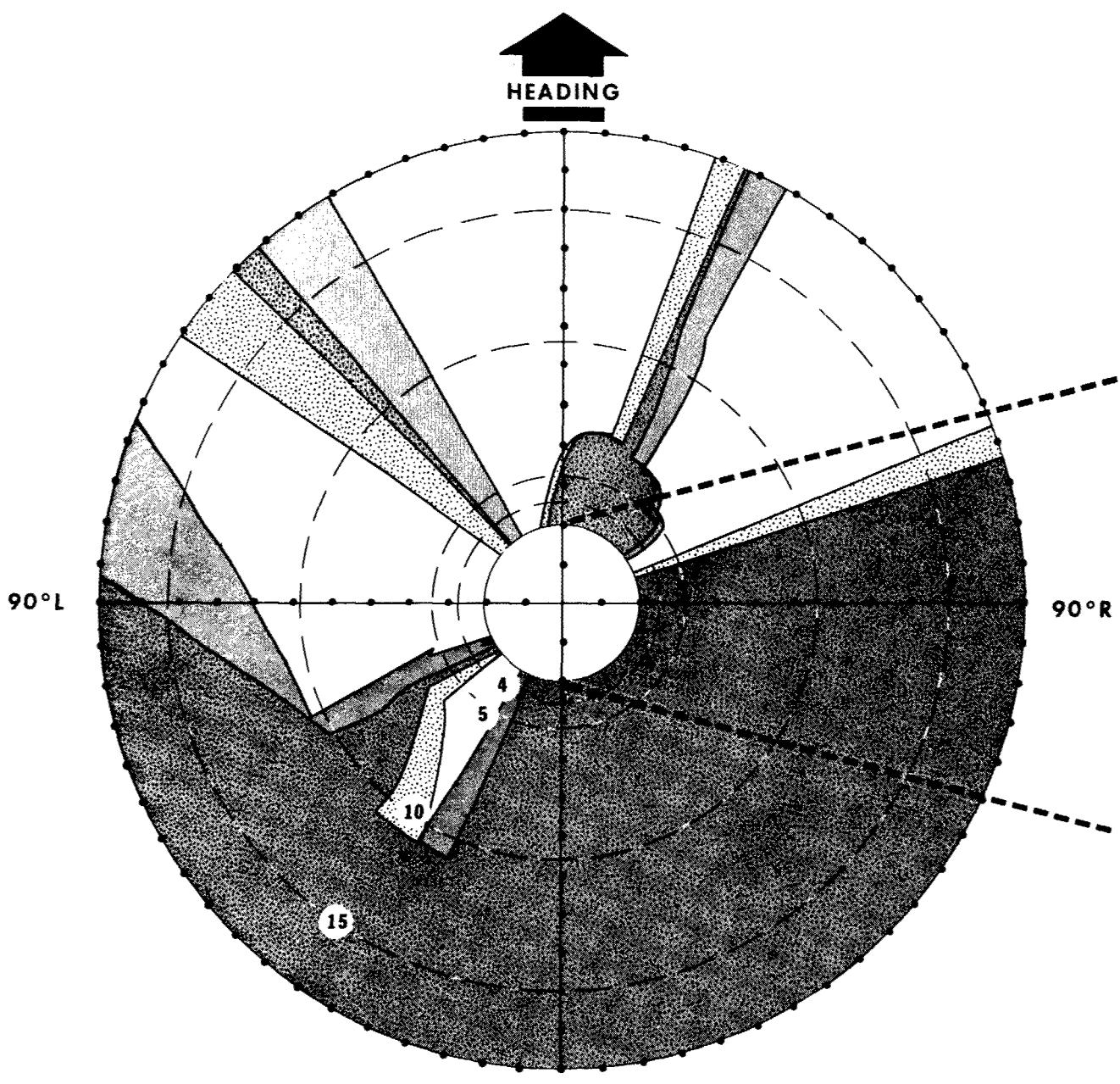


Figure 31. Binocular Cockpit Visibility Photograph and Record
- O-2 Pilot, Aircraft Level (Estimated)



SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 32. Ground Visibility Plots
- O-2 Pilot, Aircraft Level (Estimated)**

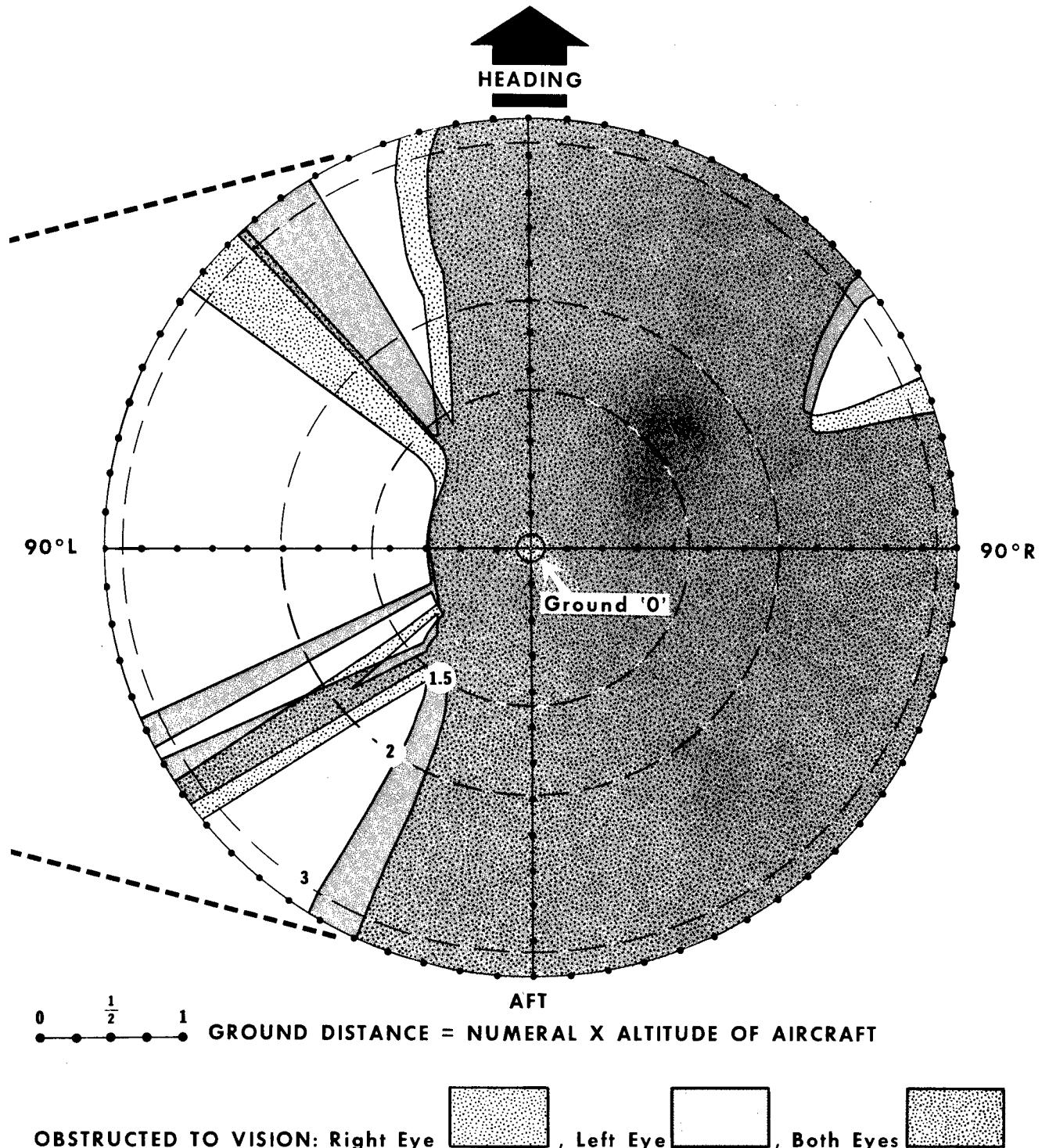
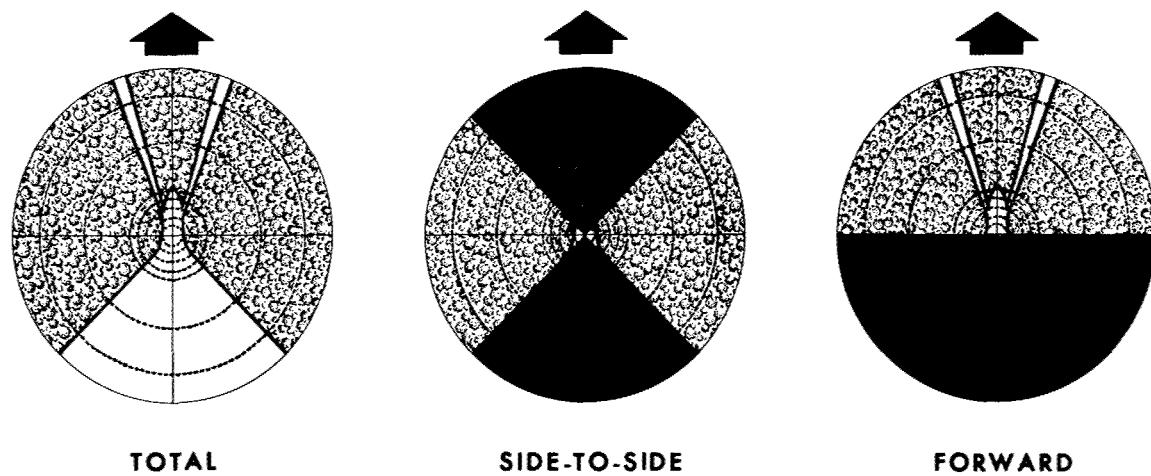


Table 16. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - O-2 Pilot, Aircraft Level (Estimated)



<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	40.5%	39.6%	69.7%
	Right or Left	46.1%	46.3%	79.5%
	Right and Left	31.9%	30.6%	57.2%
3 X Alt	Right	28.4%	39.8%	30.2%
	Right or Left	33.4%	46.1%	38.2%
	Right and Left	22.5%	36.0%	24.4%
<hr/>				
<i>Slant Range</i>				
15 X Alt	Right	41.9%	45.0%	67.8%
10 X Alt	Right	42.8%	54.0%	60.0%
5 X Alt	Right	33.3%	42.7%	37.3%
4 X Alt	Right	31.0%	41.1%	31.9%
3 X Alt	Right	27.3%	38.8%	30.1%
2 X Alt	Right	19.9%	31.4%	19.9%
1.5 X Alt	Right	12.5%	23.5%	12.1%

OV-10A Pilot

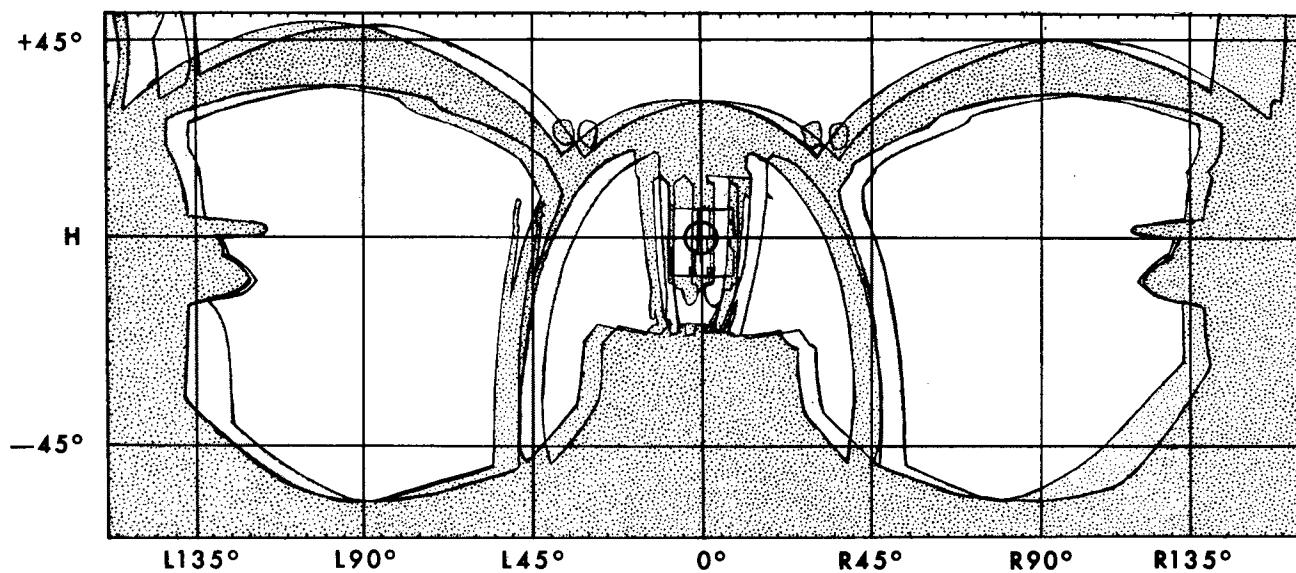
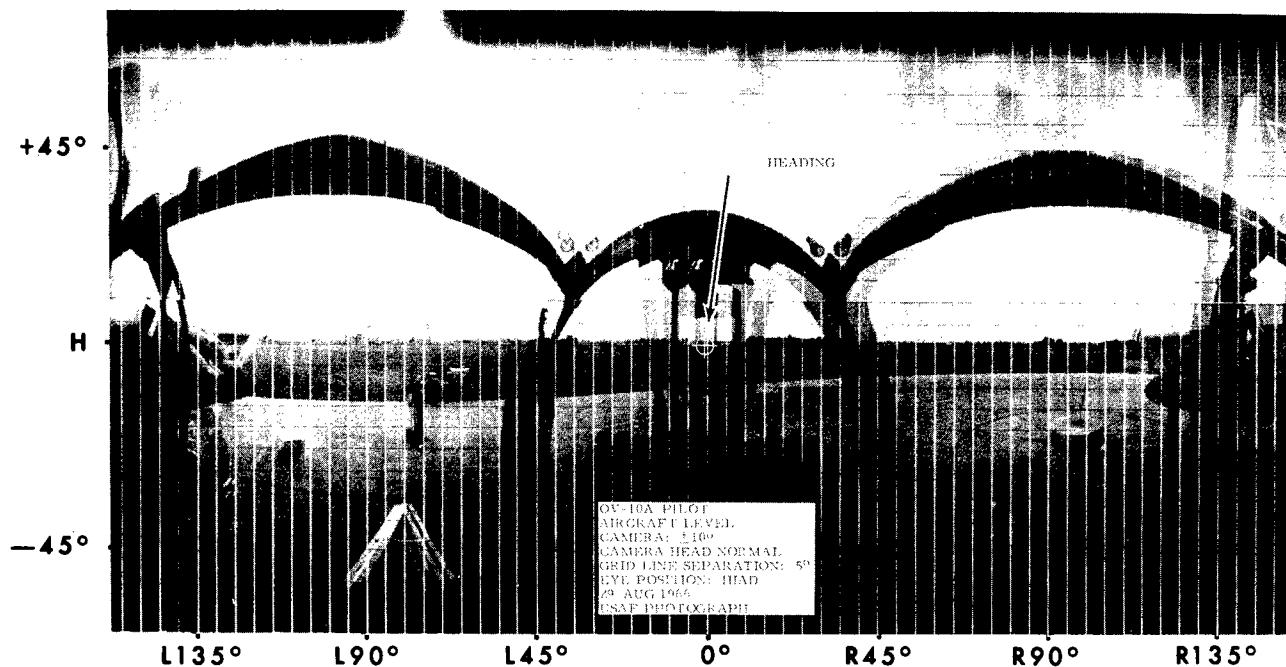
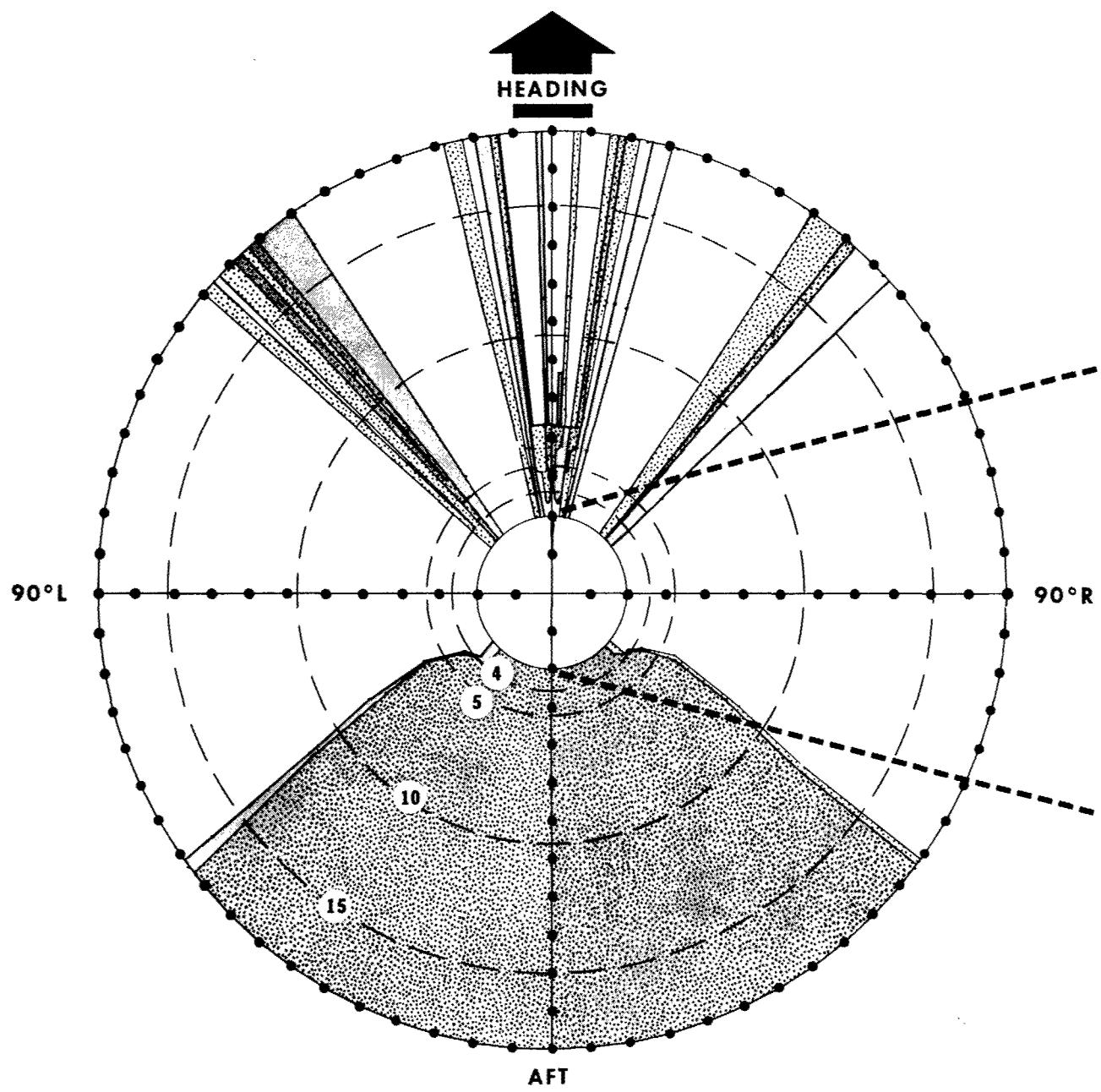
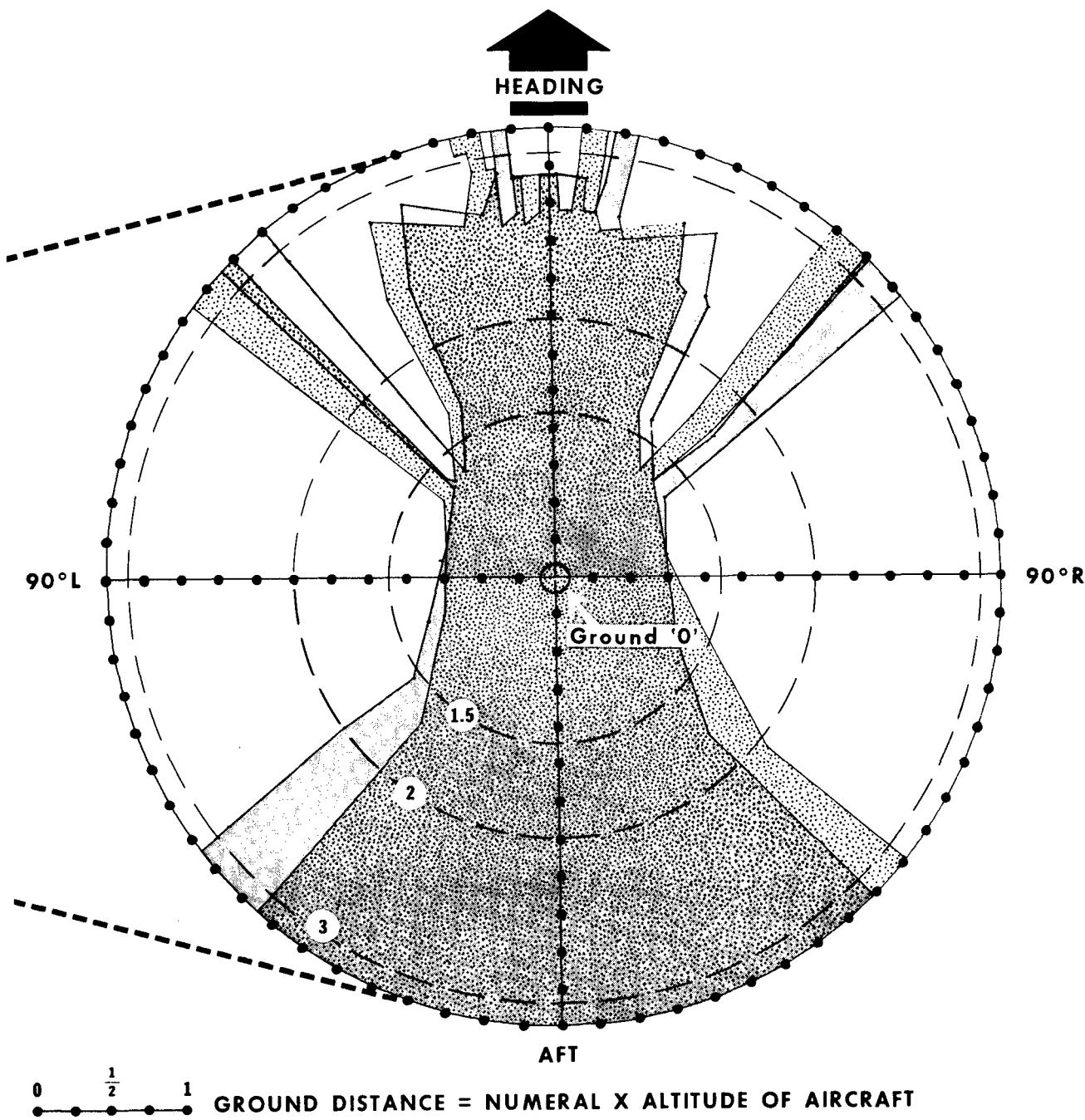


Figure 33. Binocular Cockpit Visibility Photograph and Record
- OV-10A Pilot, Aircraft Level

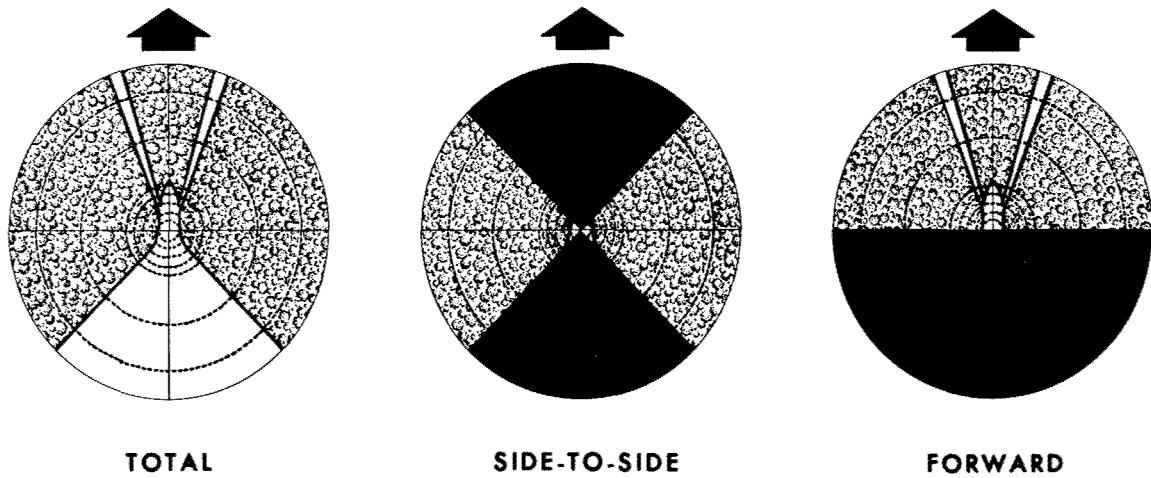


**Figure 34. Ground Visibility Plots
- OV-10A Pilot, Aircraft Level**



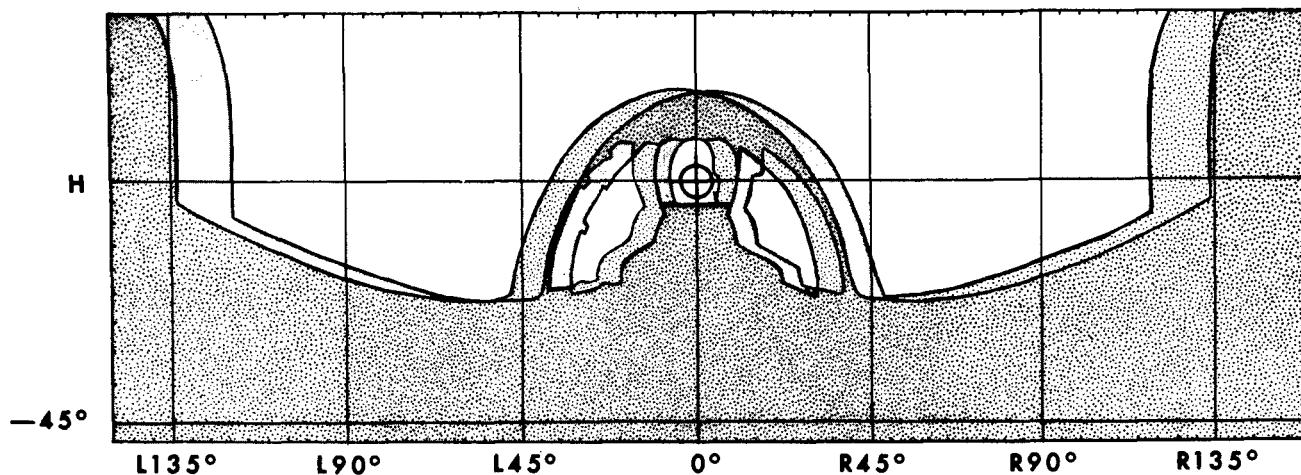
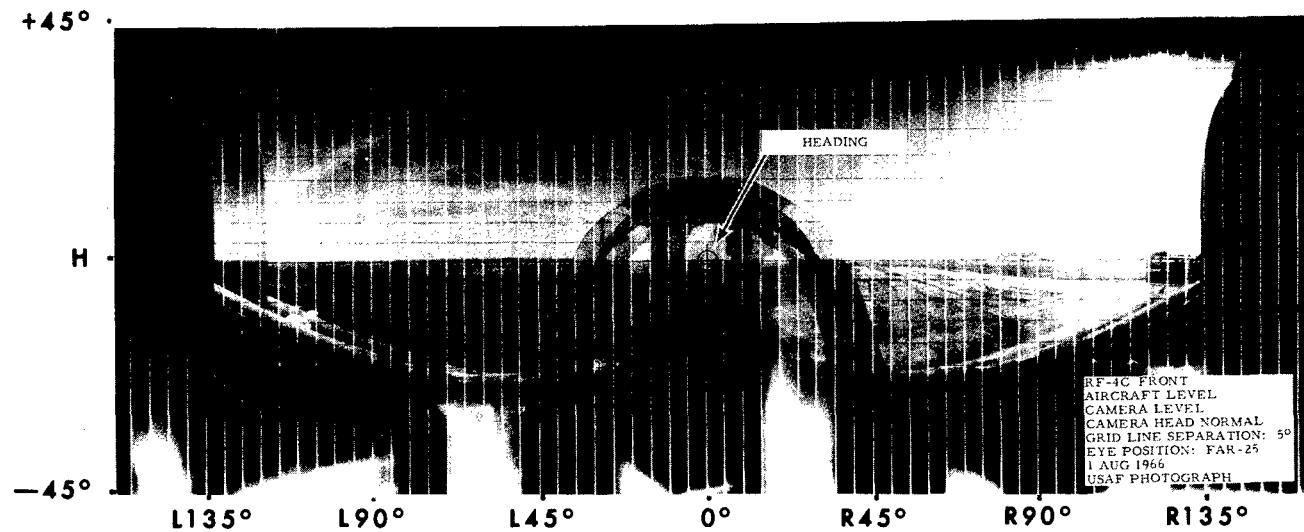
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 17. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - OV-10A Pilot, Aircraft Level

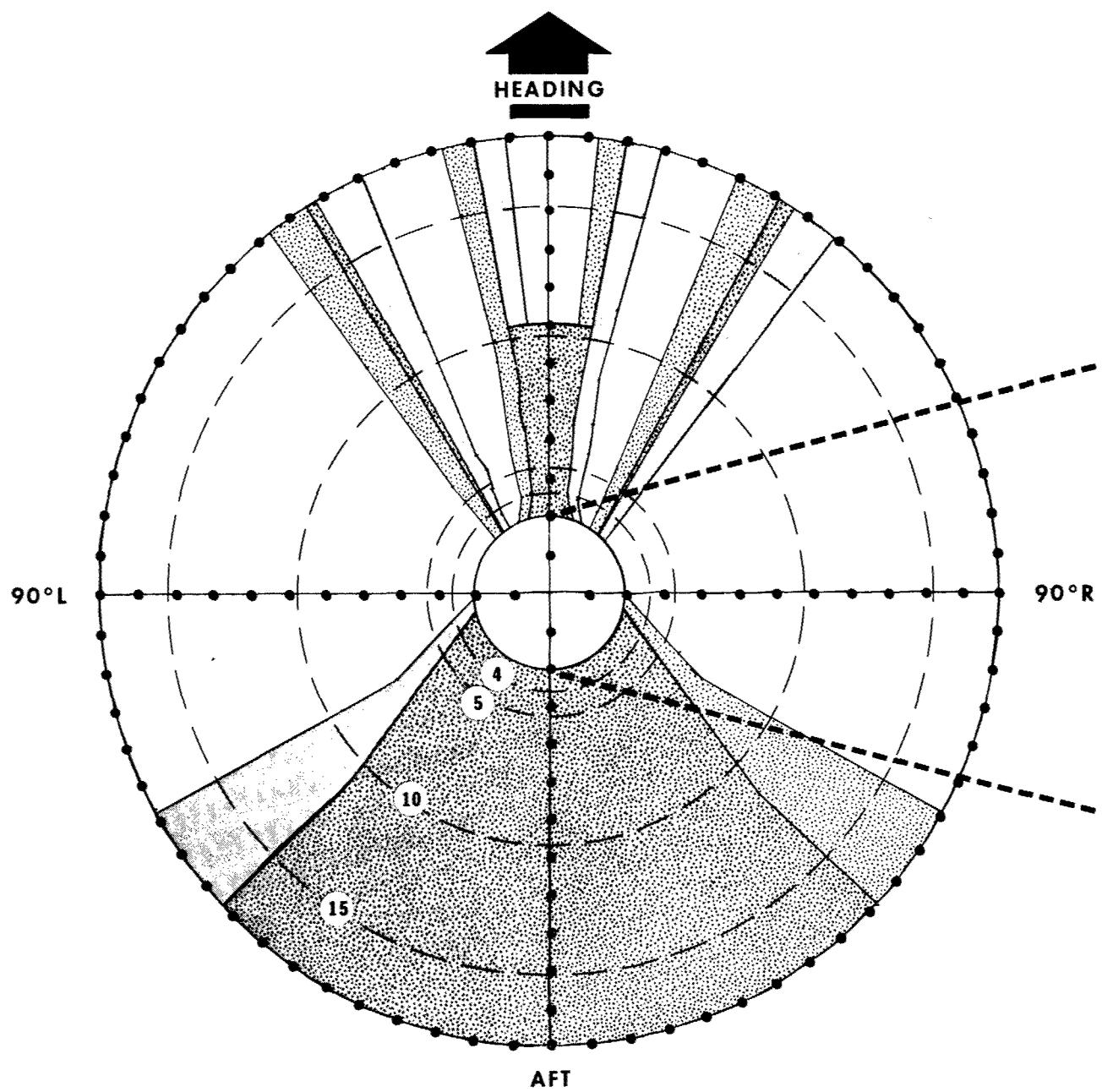


Ground Radius	Eye	Fields of View		
		Total	Side-to-Side	Forward
18 X Alt	Right	62.1%	84.9%	86.0%
	Right or Left	67.6%	88.3%	96.1%
	Right and Left	57.0%	81.7%	76.6%
3 X Alt	Right	52.3%	82.0%	64.1%
	Right or Left	60.1%	89.8%	73.5%
	Right and Left	45.7%	73.7%	54.9%
<hr/>				
Slant Range				
15 X Alt	Right	61.0%	84.7%	85.5%
10 X Alt	Right	59.7%	82.8%	83.7%
5 X Alt	Right	58.9%	85.1%	77.0%
4 X Alt	Right	57.0%	92.2%	74.9%
3 X Alt	Right	51.4%	81.9%	61.1%
2 X Alt	Right	37.9%	65.7%	44.2%
1.5 X Alt	Right	17.6%	33.6%	23.6%

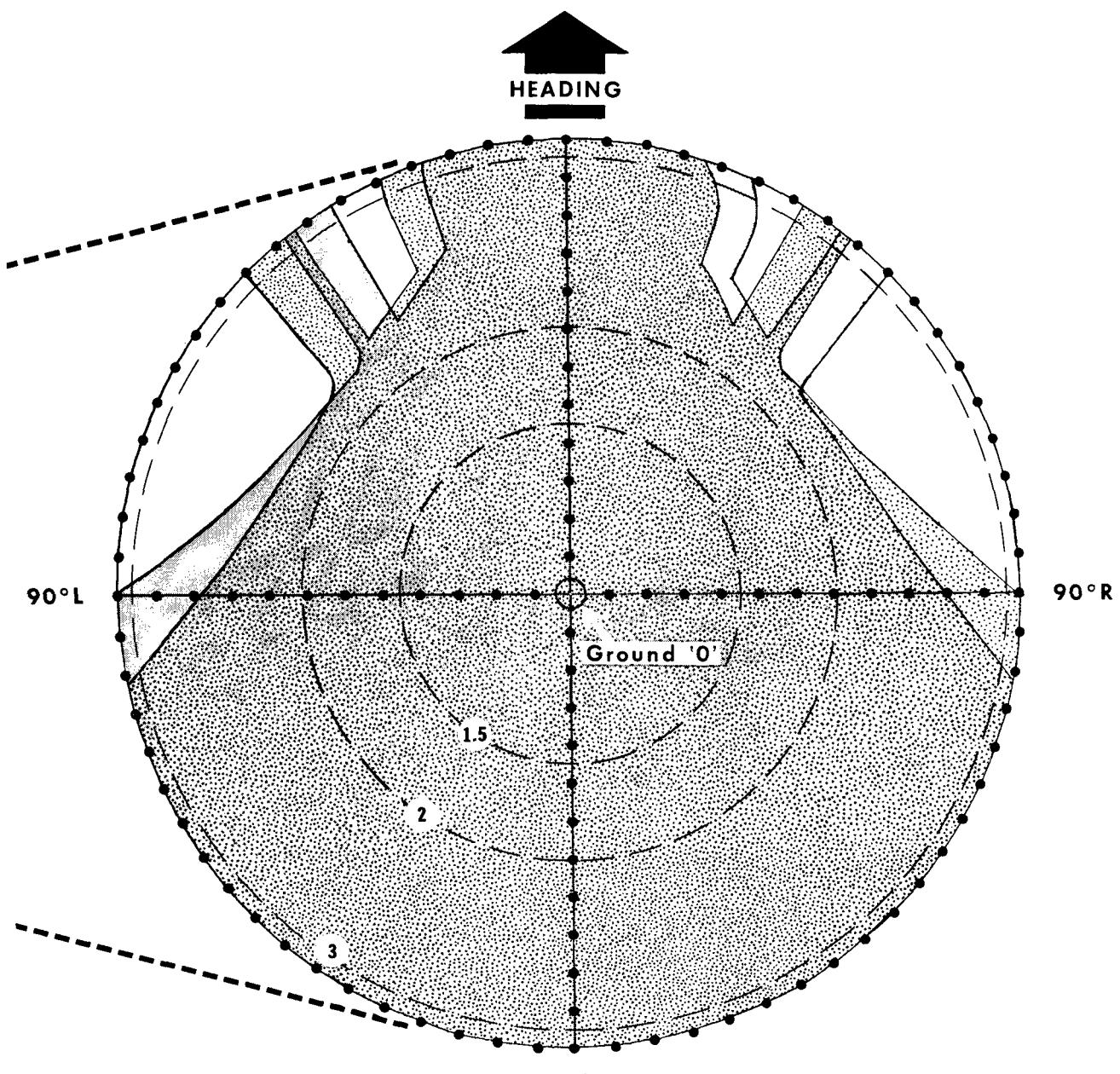
RF - 4C Front



**Figure 35. Binocular Cockpit Visibility Photograph and Record
- RF-4C Front, Aircraft Level**



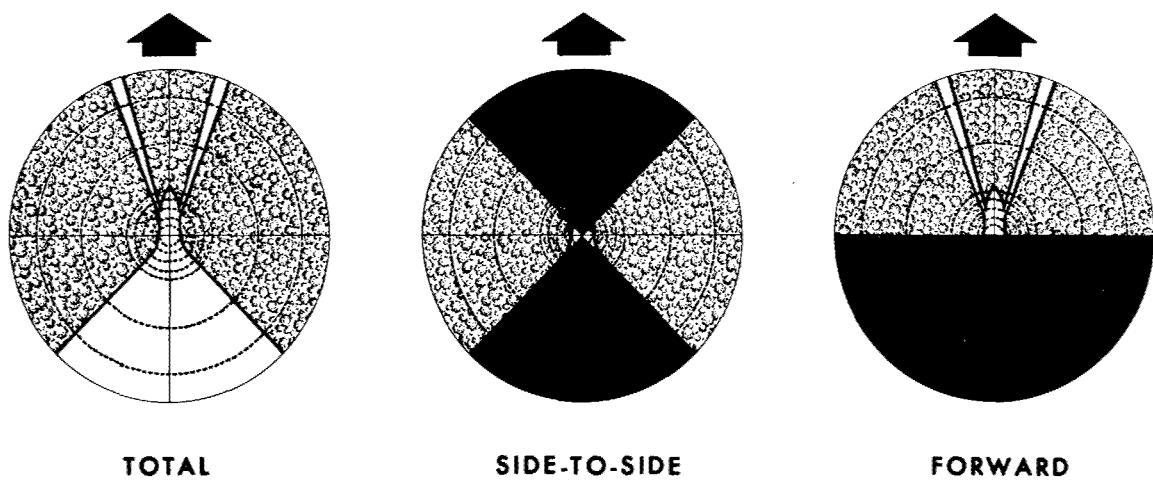
**Figure 36. Ground Visibility Plots
RF-4C Front, Aircraft Level**



0 $\frac{1}{2}$ 1 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

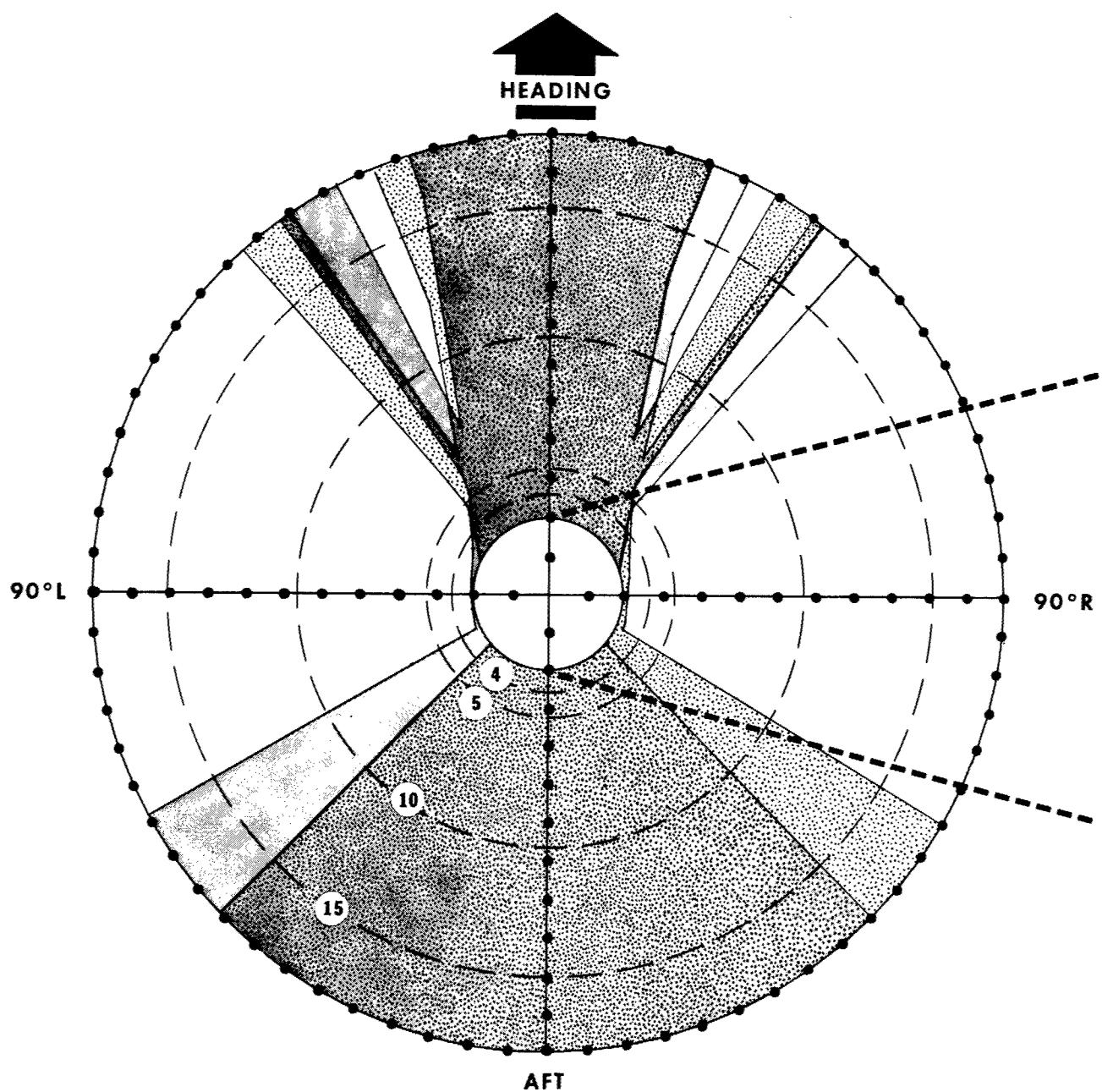
OBSSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

Table 18. Percent of Ground Area Visible within Selected Ground Radii and Slant Ranges - RF-4C Front, Aircraft Level



<i>Ground Radius</i>	<i>Eye</i>	<i>Fields of View</i>		
		<i>Total</i>	<i>Side-to-Side</i>	<i>Forward</i>
18 X Alt	Right	58.5%	83.7%	80.4%
	Right or Left	67.0%	90.5%	93.8%
	Right and Left	49.7%	76.8%	69.6%
3 X Alt	Right	14.9%	22.1%	28.4%
	Right or Left	18.7%	25.9%	35.3%
	Right and Left	10.8%	18.6%	21.6%
<i>Slant Range</i>				
15 X Alt	Right	57.2%	82.7%	79.1%
10 X Alt	Right	50.9%	76.5%	71.3%
5 X Alt	Right	34.8%	51.3%	56.0%
4 X Alt	Right	26.4%	40.3%	46.8%
3 X Alt	Right	12.4%	19.4%	24.7%
2 X Alt	Right	0.0%	0.0%	0.0%
1.5 X Alt	Right	0.0%	0.0%	0.0%

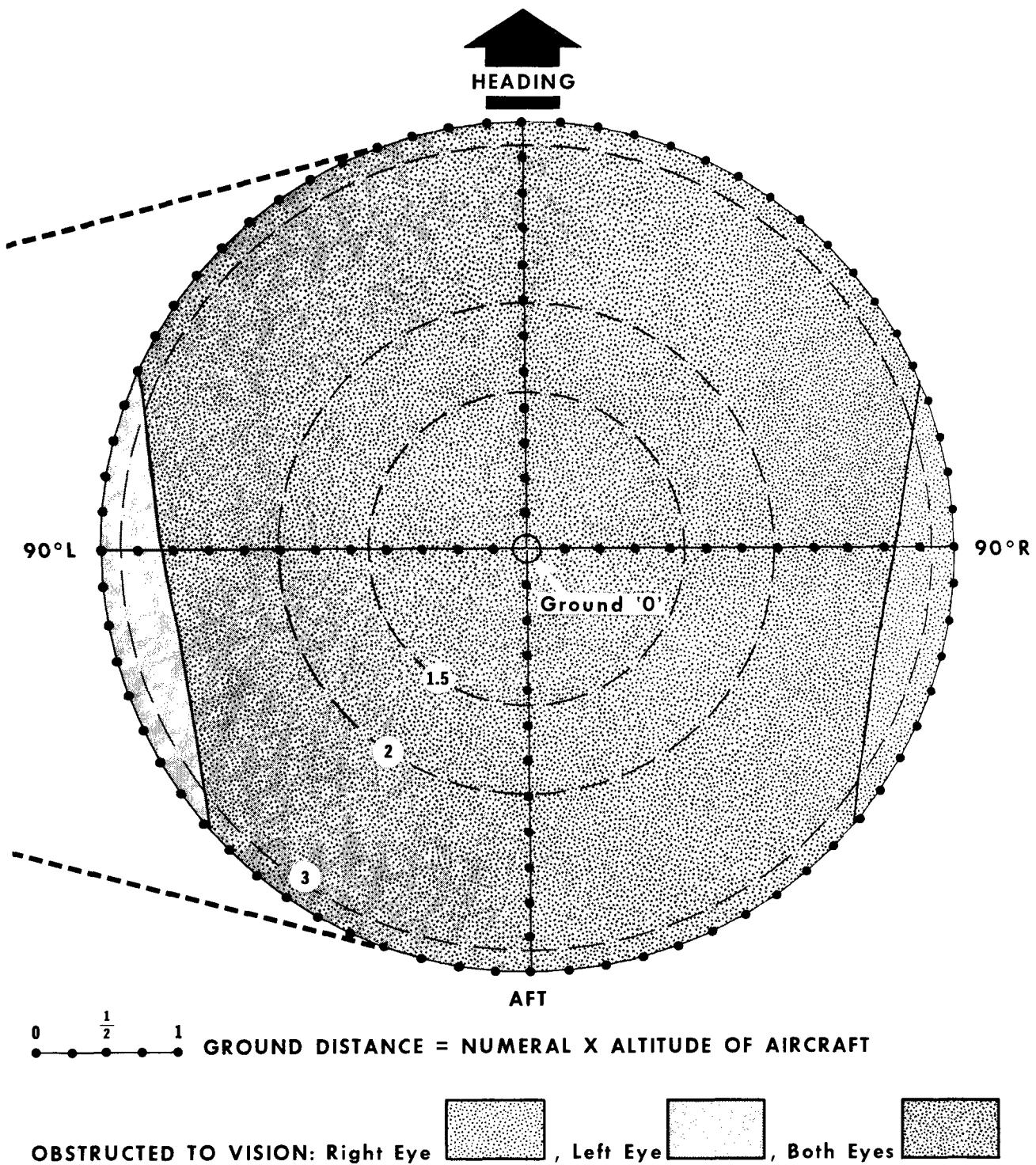
**VISIBILITY TOWARD THE GROUND FROM RF-4C
FRONT COCKPIT
SELECTED ATTITUDES OF PITCH AND ROLL**

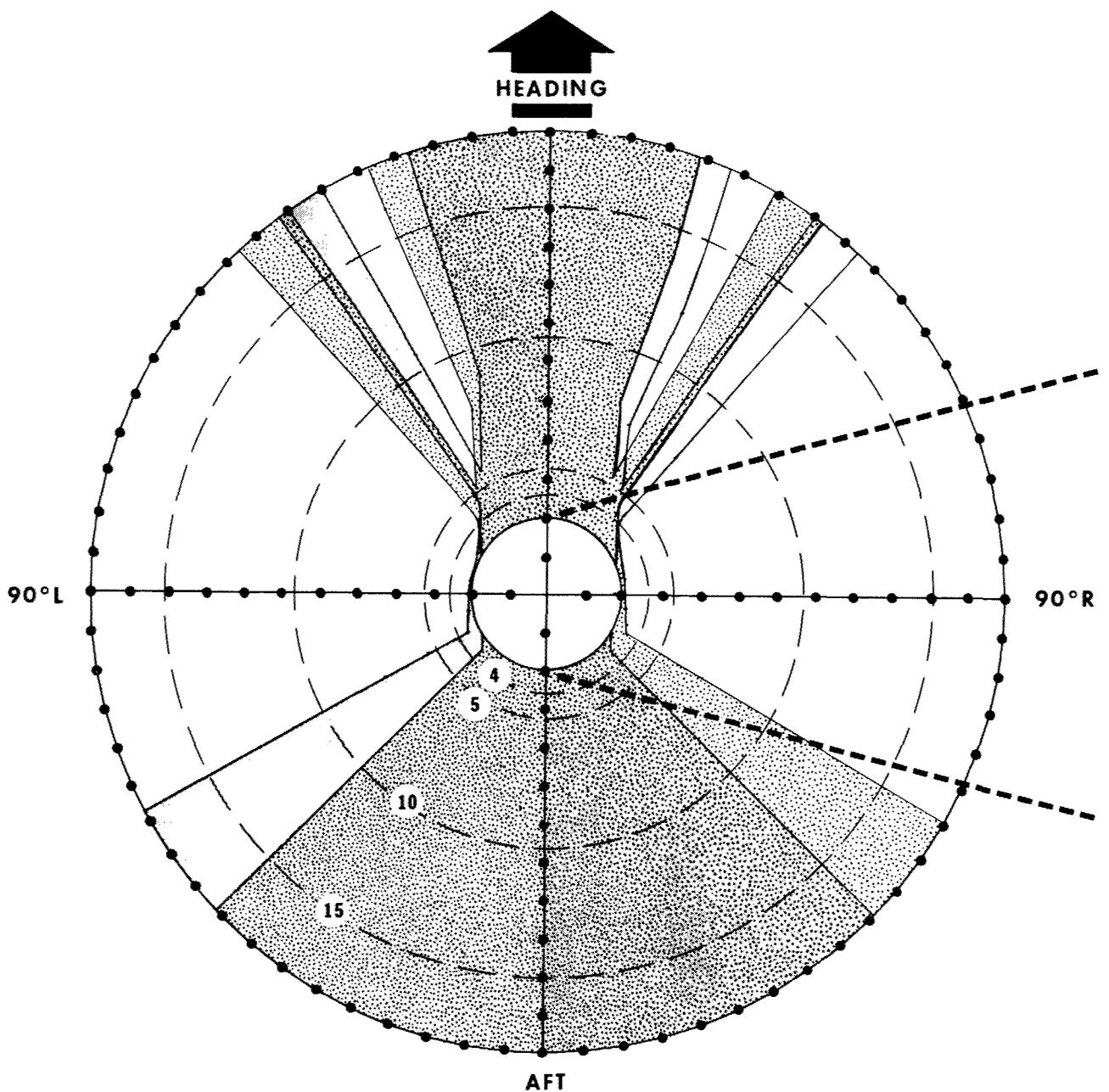


SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 37. Ground Visibility Plots
- RF-4C Front - 20° Pitch Up**

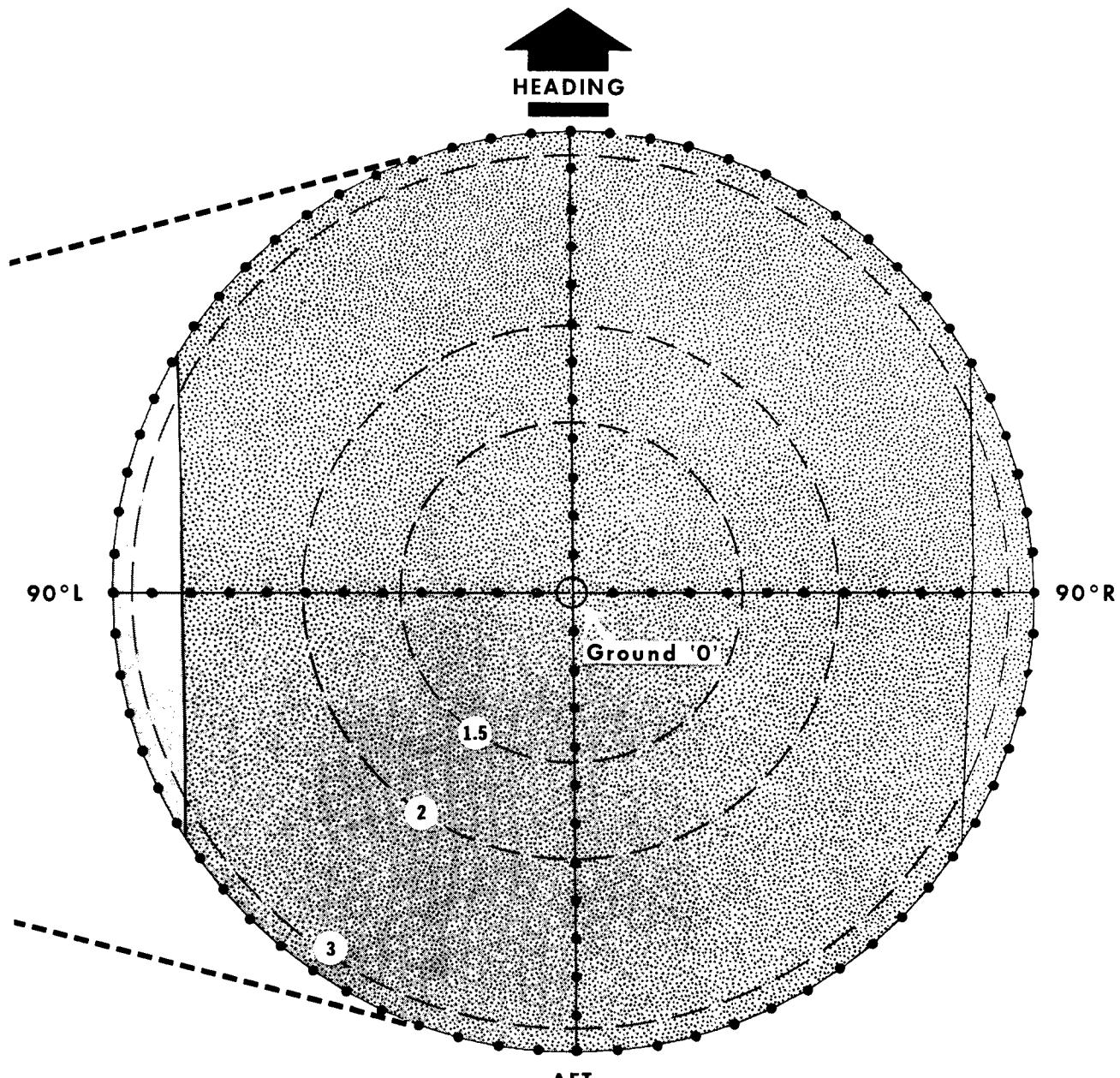




**SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT**

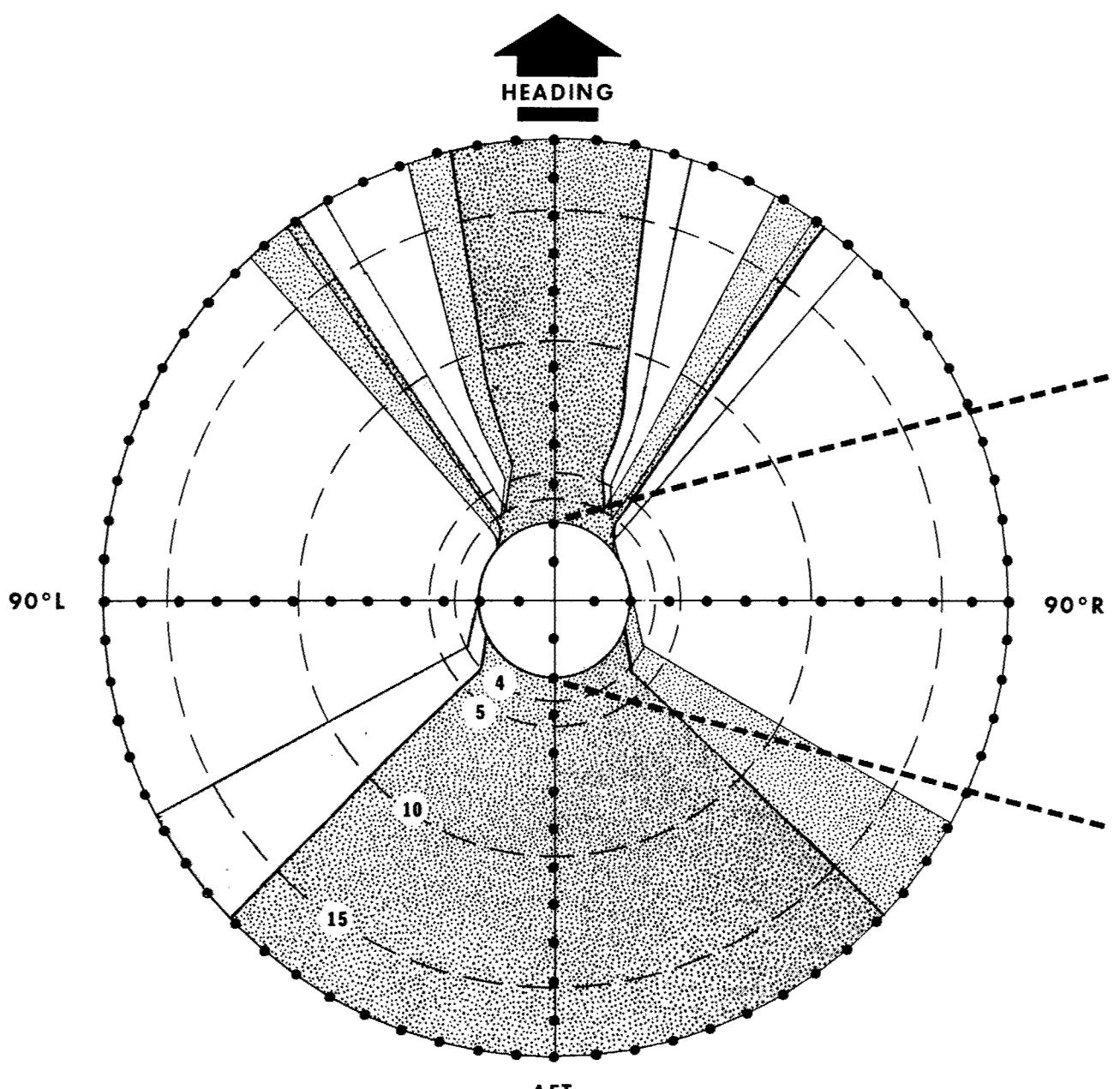
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 38. Ground Visibility Plots
- RF-4C Front - 17° Pitch Up**



GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

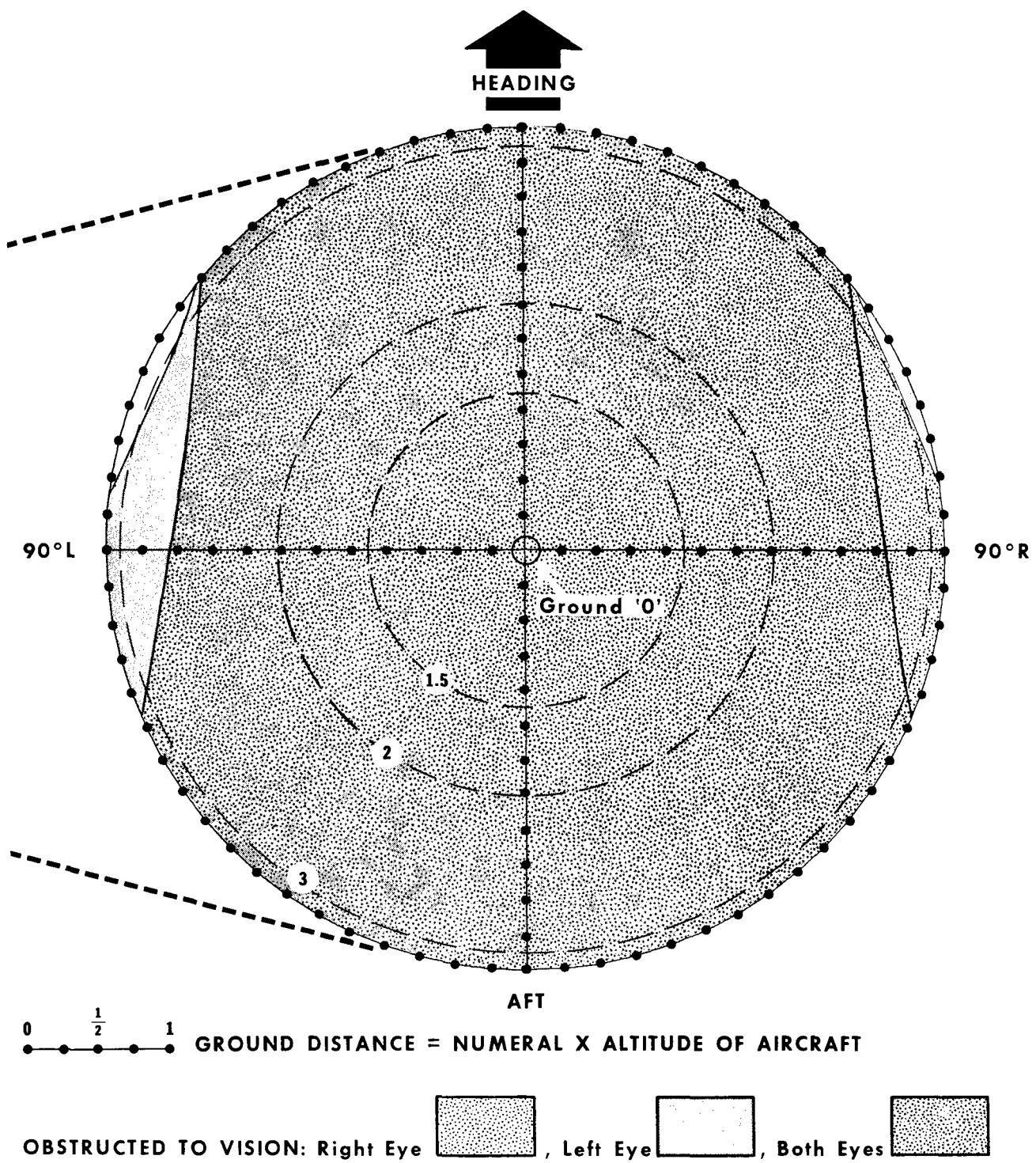
OBSTRUCTED TO VISION: Right Eye Left Eye , Both Eyes

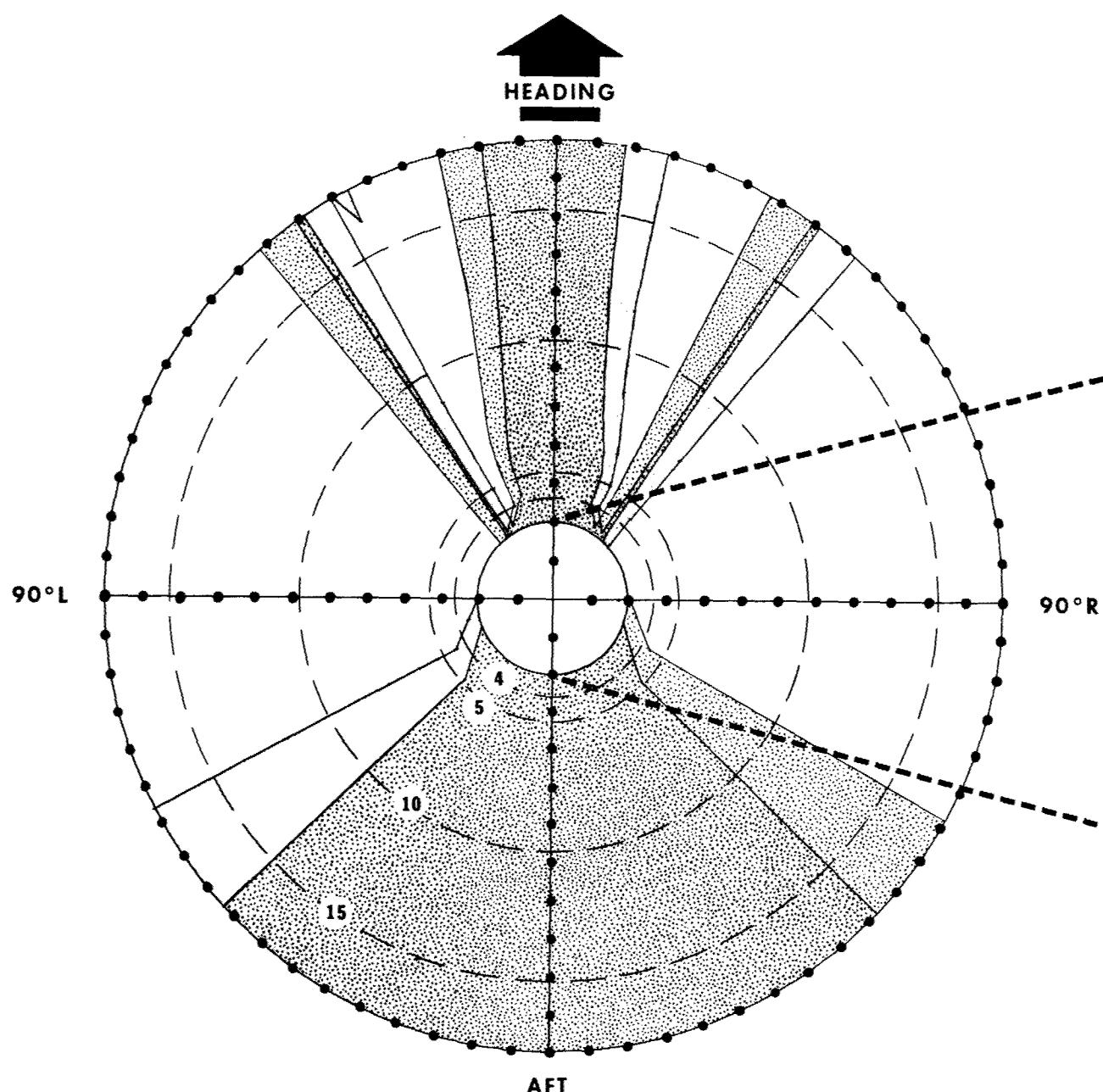


SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 39. Ground Visibility Plots
- RF-4C Front - 13° Pitch Up**

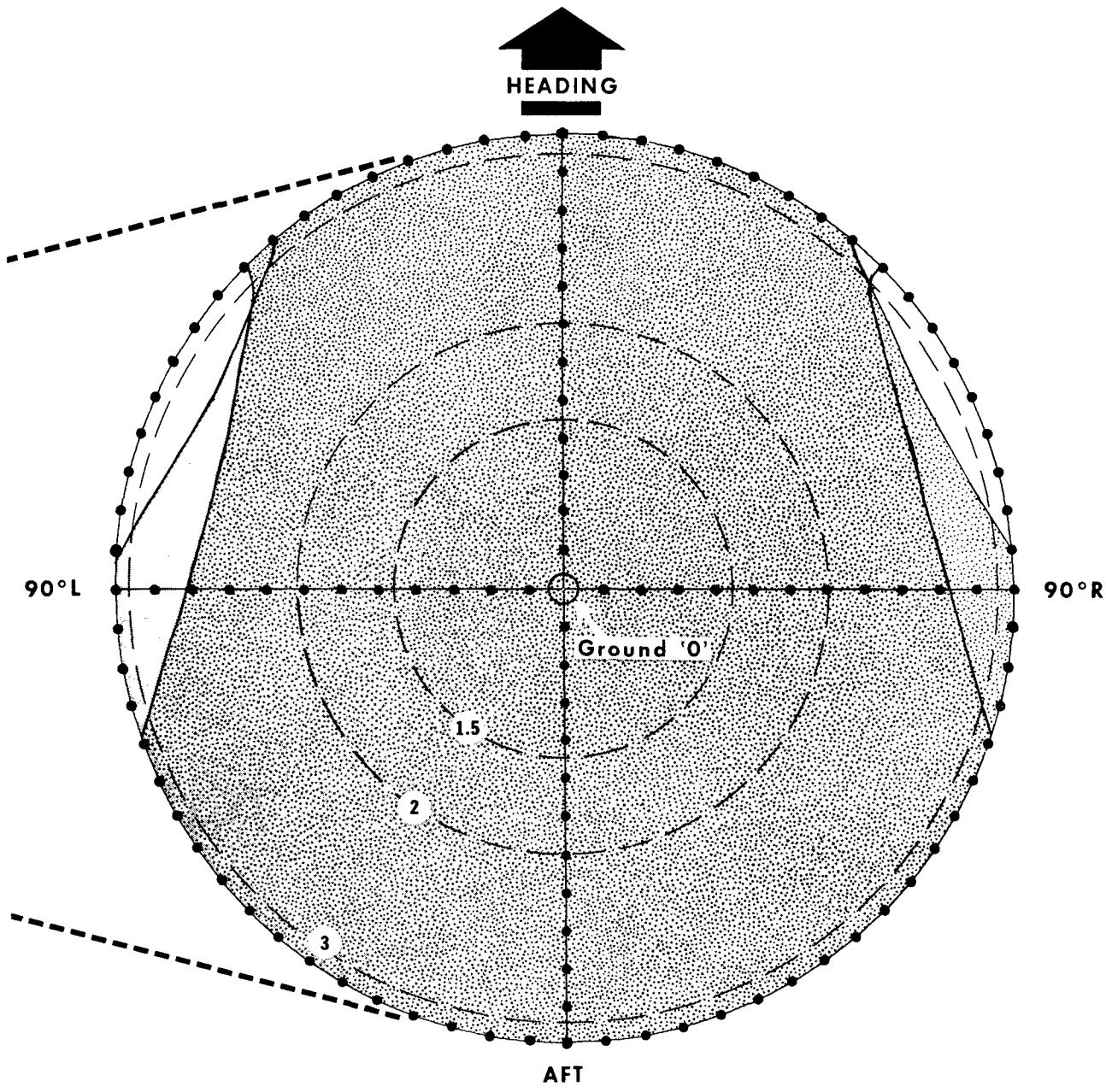




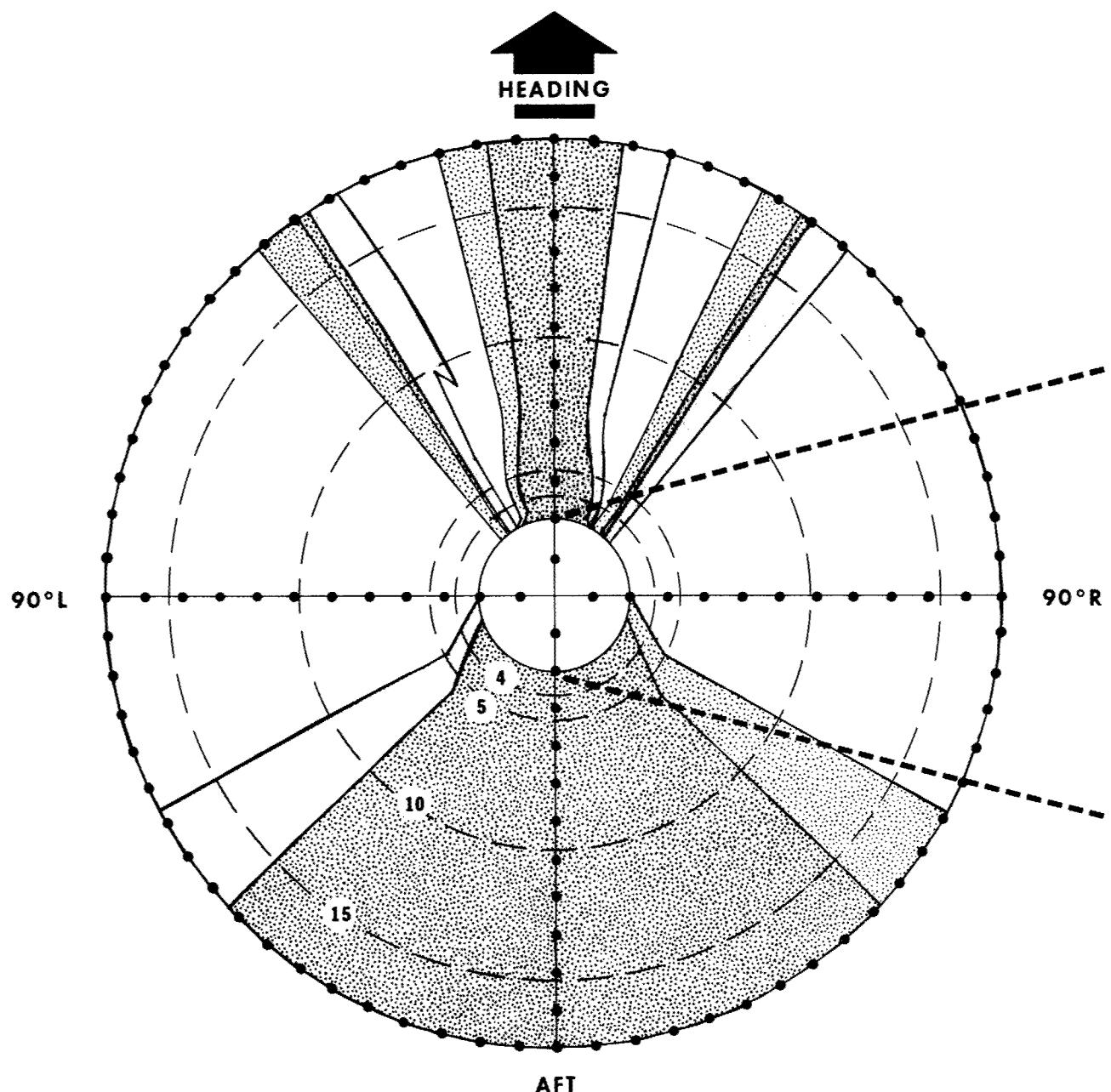
SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

Figure 40. Ground Visibility Plots
- RF-4C Front - 10° Pitch Up



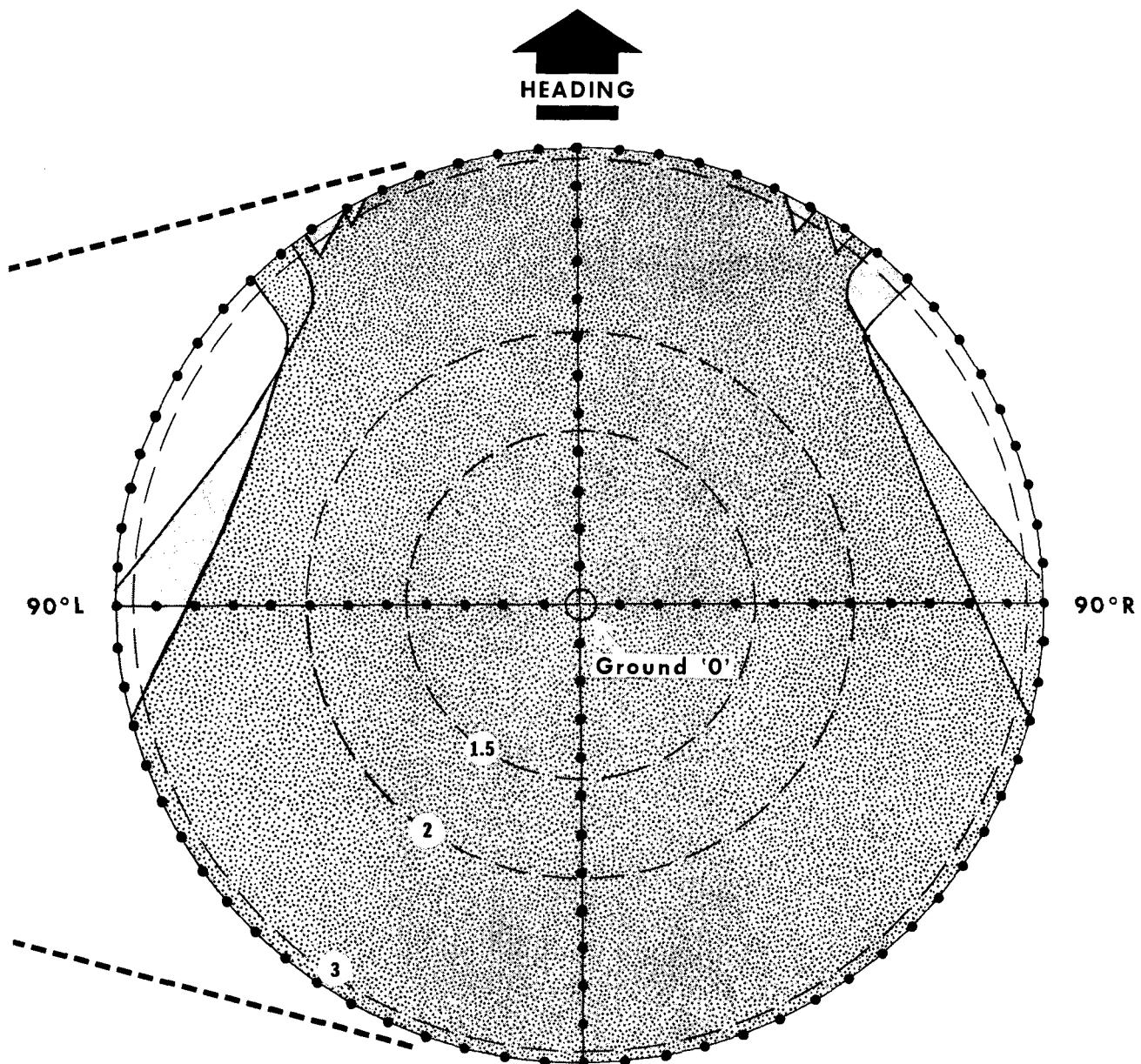
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes



SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

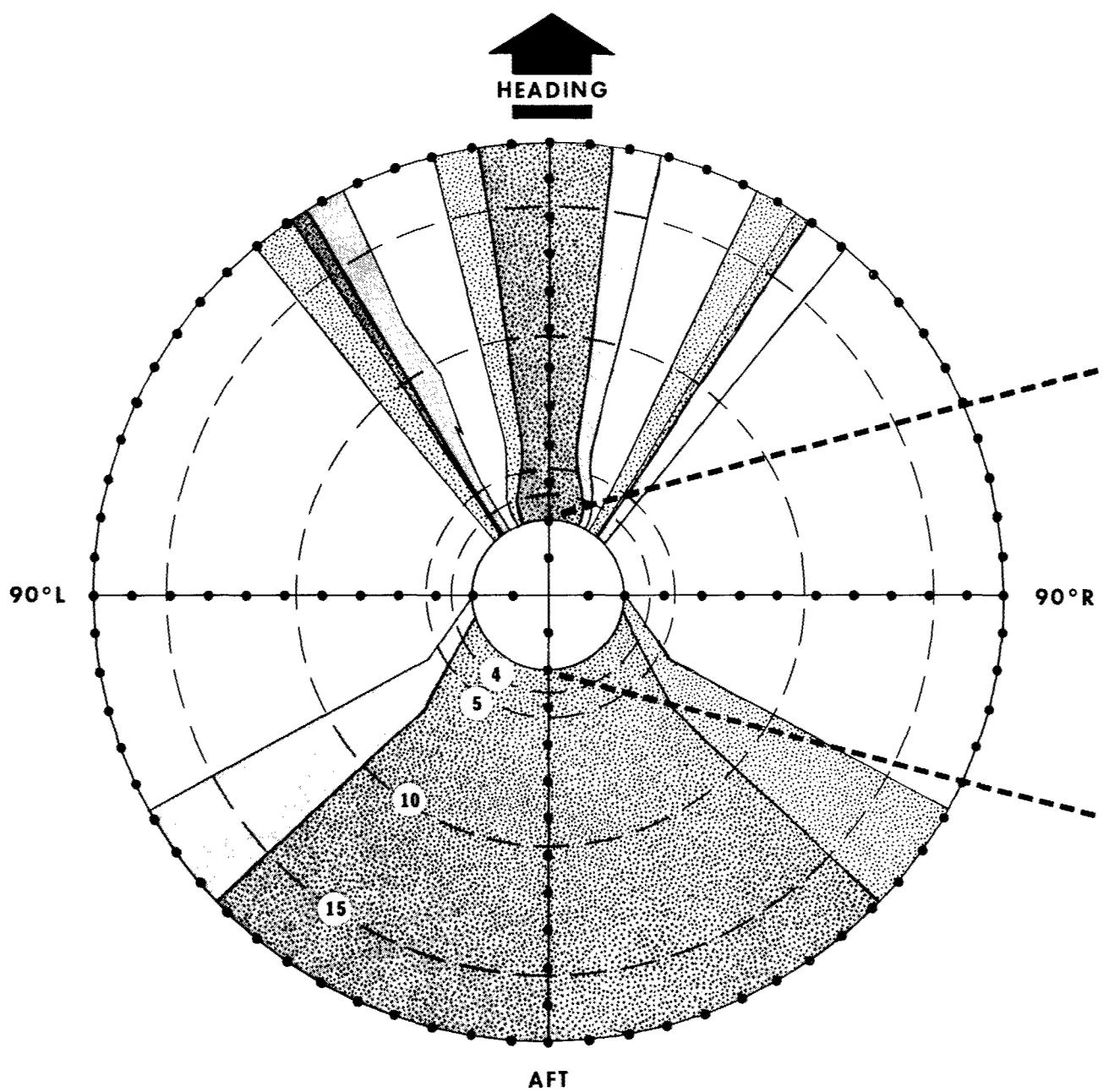
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 41. Ground Visibility Plots
- RF-4C Front -7° Pitch Up**



GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

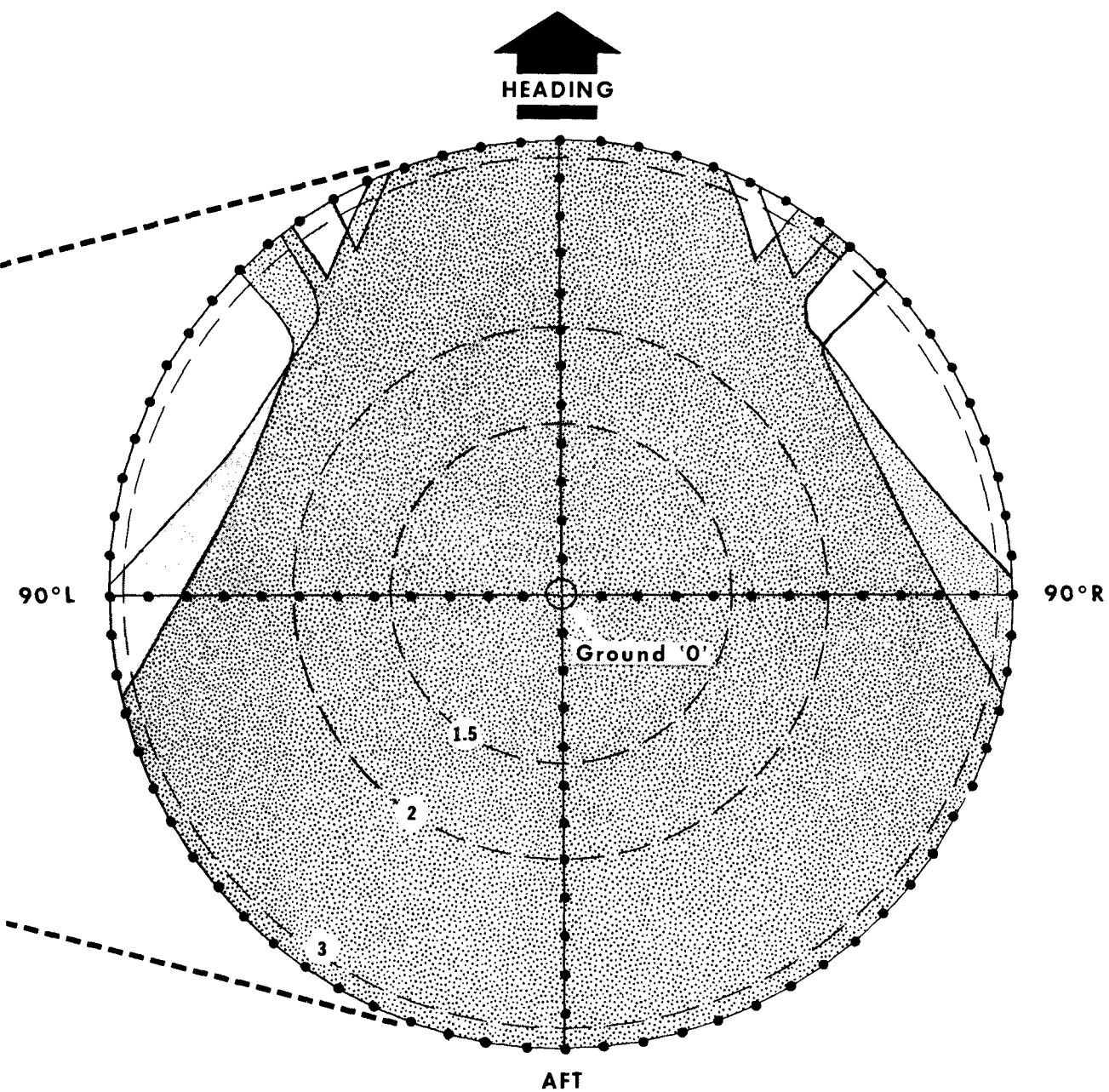


**SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT**

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

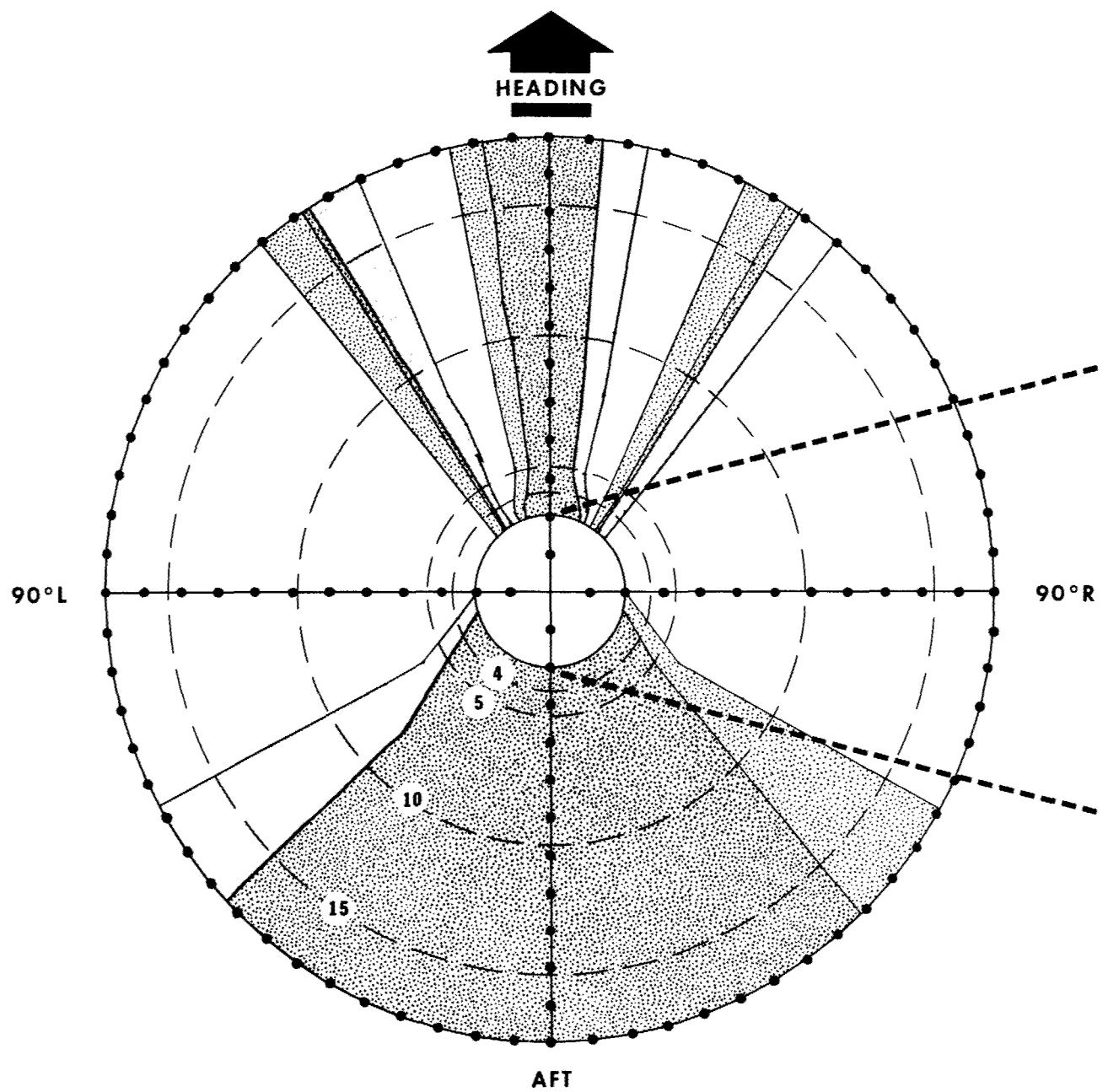
Figure 42. Ground Visibility Plots

- RF-4C Front, 5° Pitch Up



0 $\frac{1}{2}$ 1 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

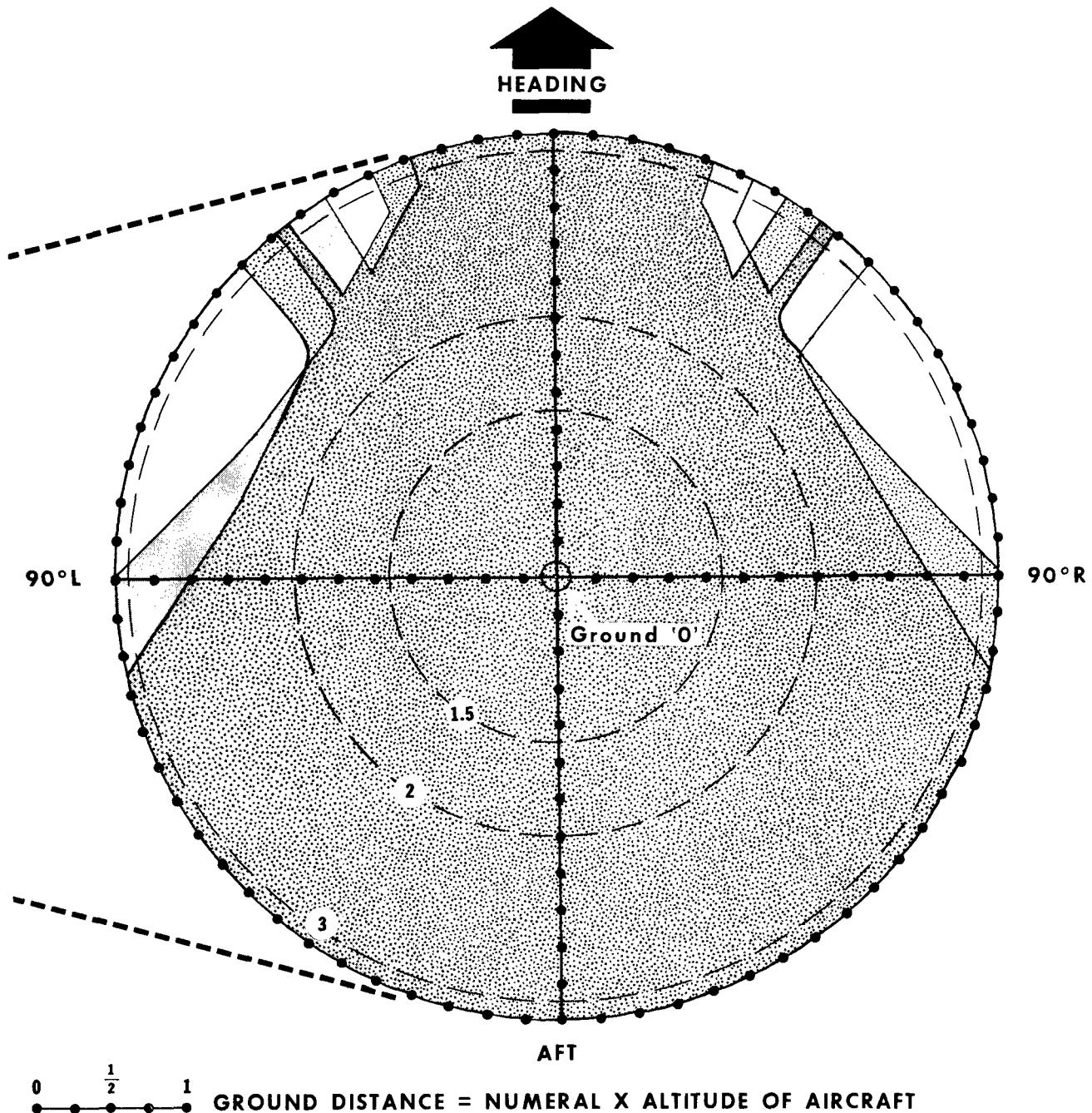
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

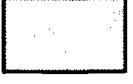


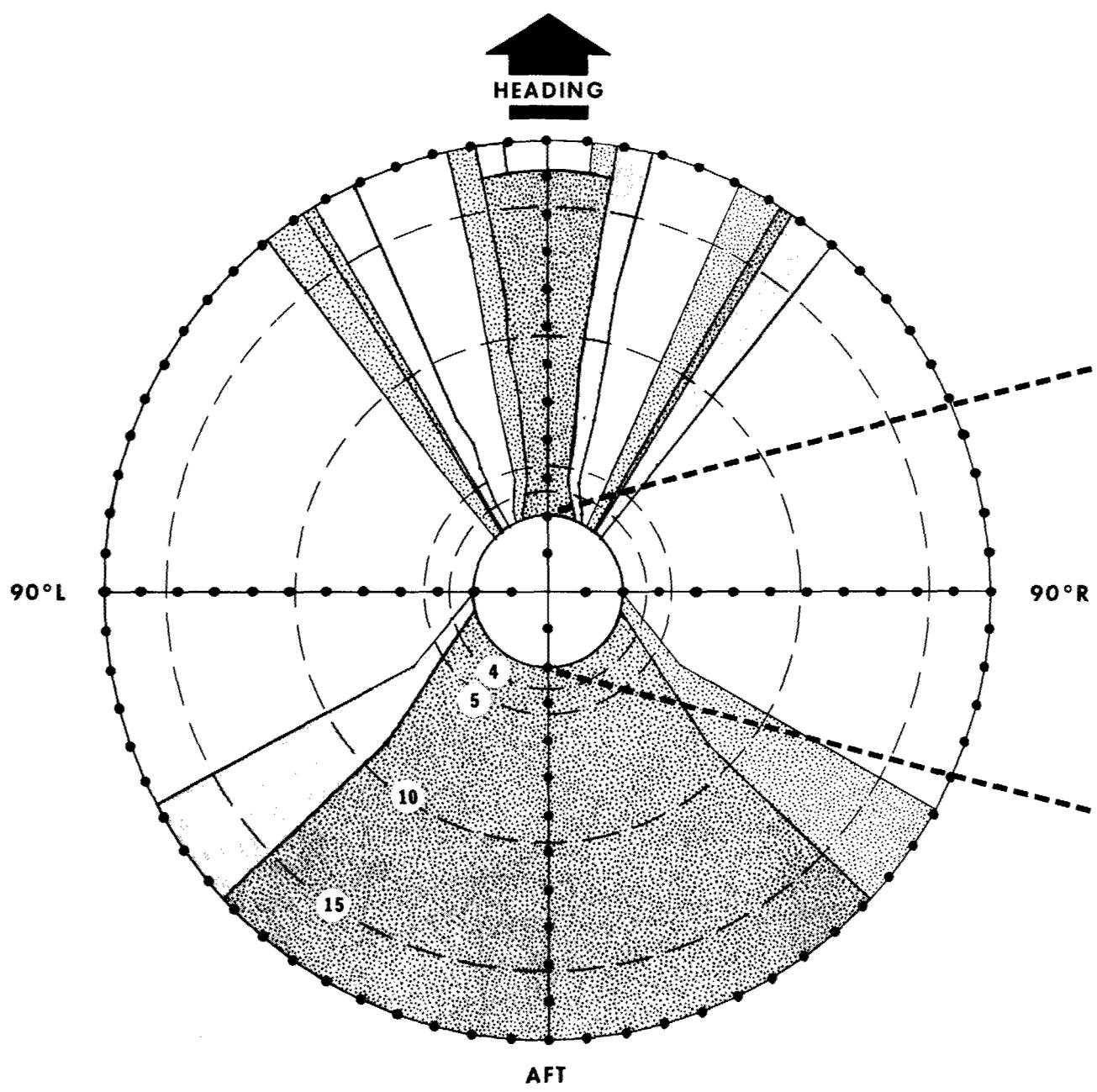
SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 43. Ground Visibility Plots
- RF-4C Front, 3° Pitch Up**



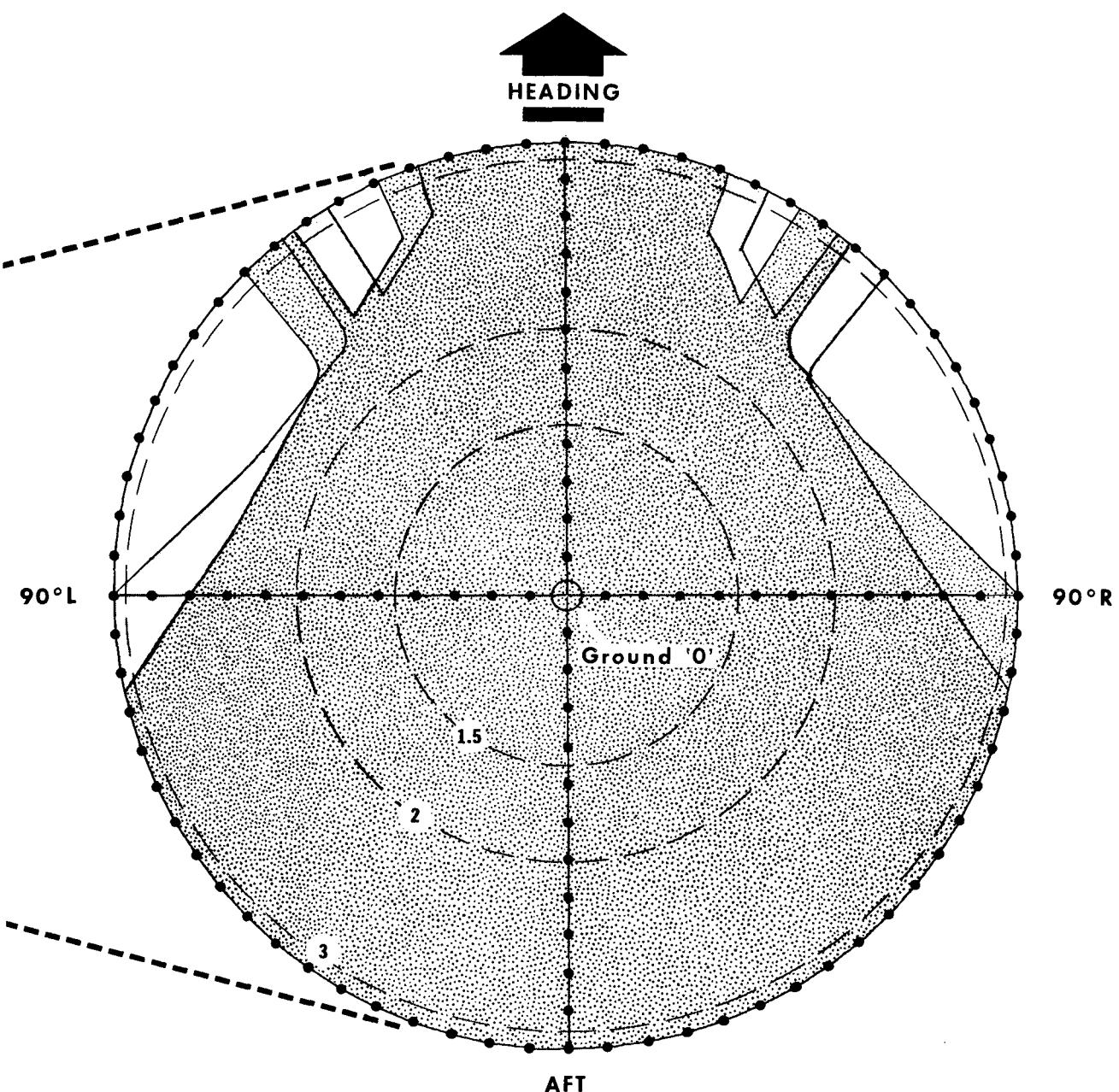
OBSTRUCTED TO VISION: Right Eye  , Left Eye  , Both Eyes 



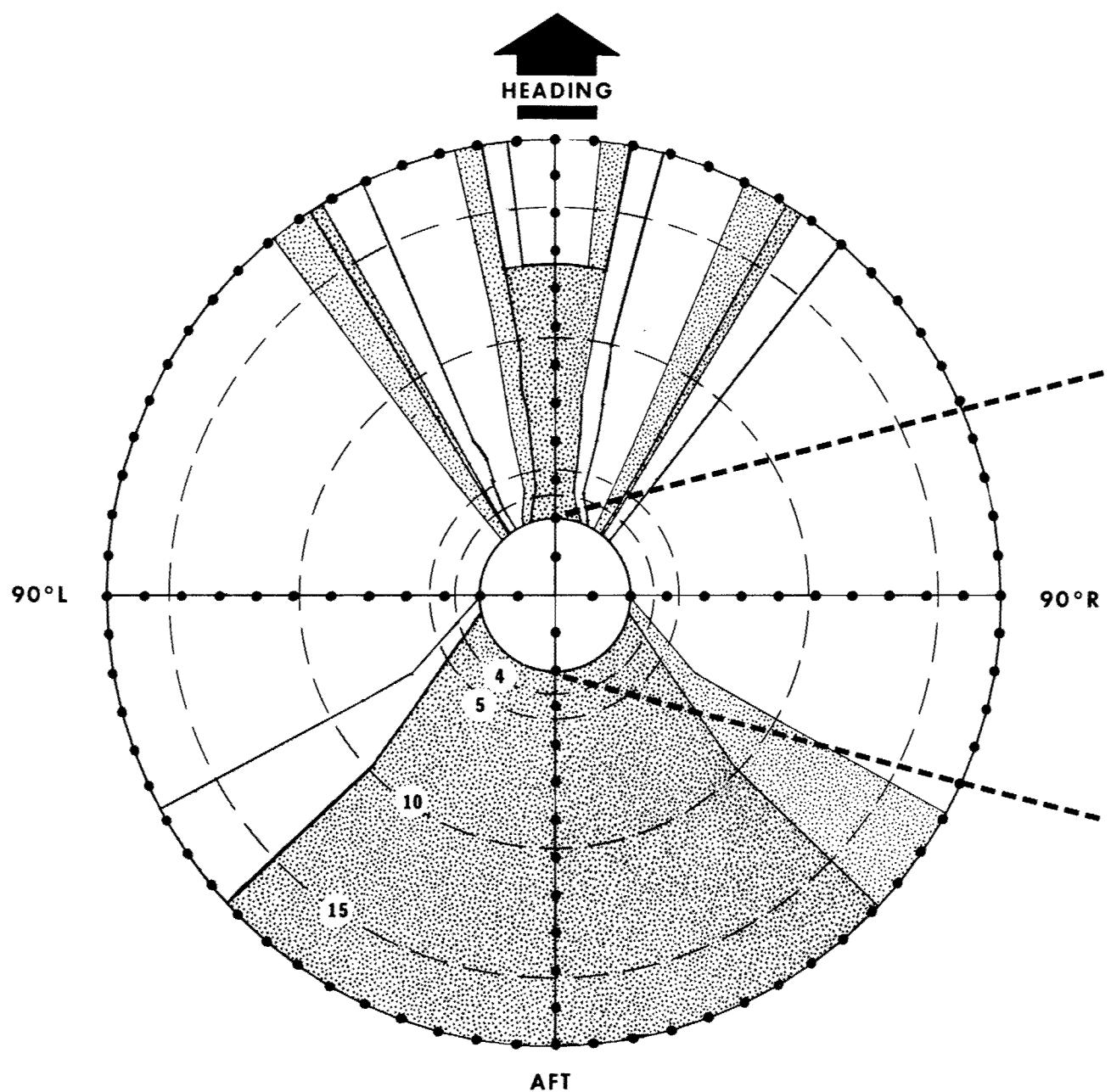
**SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT**

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 44. Ground Visibility Plots
- RF-4C Front - 2° Pitch Up**



OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

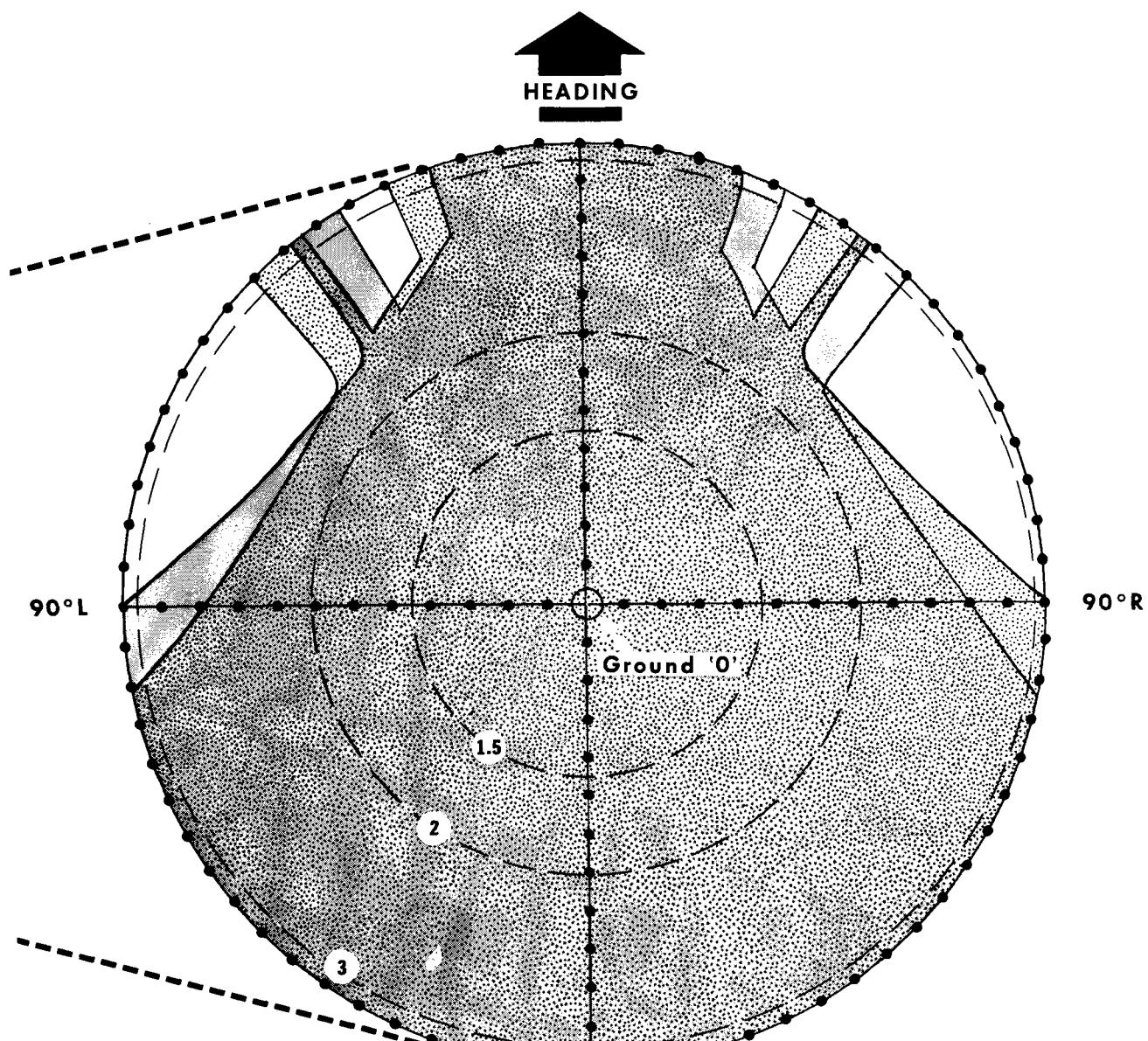


SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

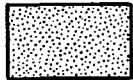
Figure 45. Ground Visibility Plots

- RF-4C Front - 1° Pitch Up

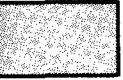


0 $\frac{1}{2}$ 1 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

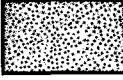
OBSTRUCTED TO VISION: Right Eye

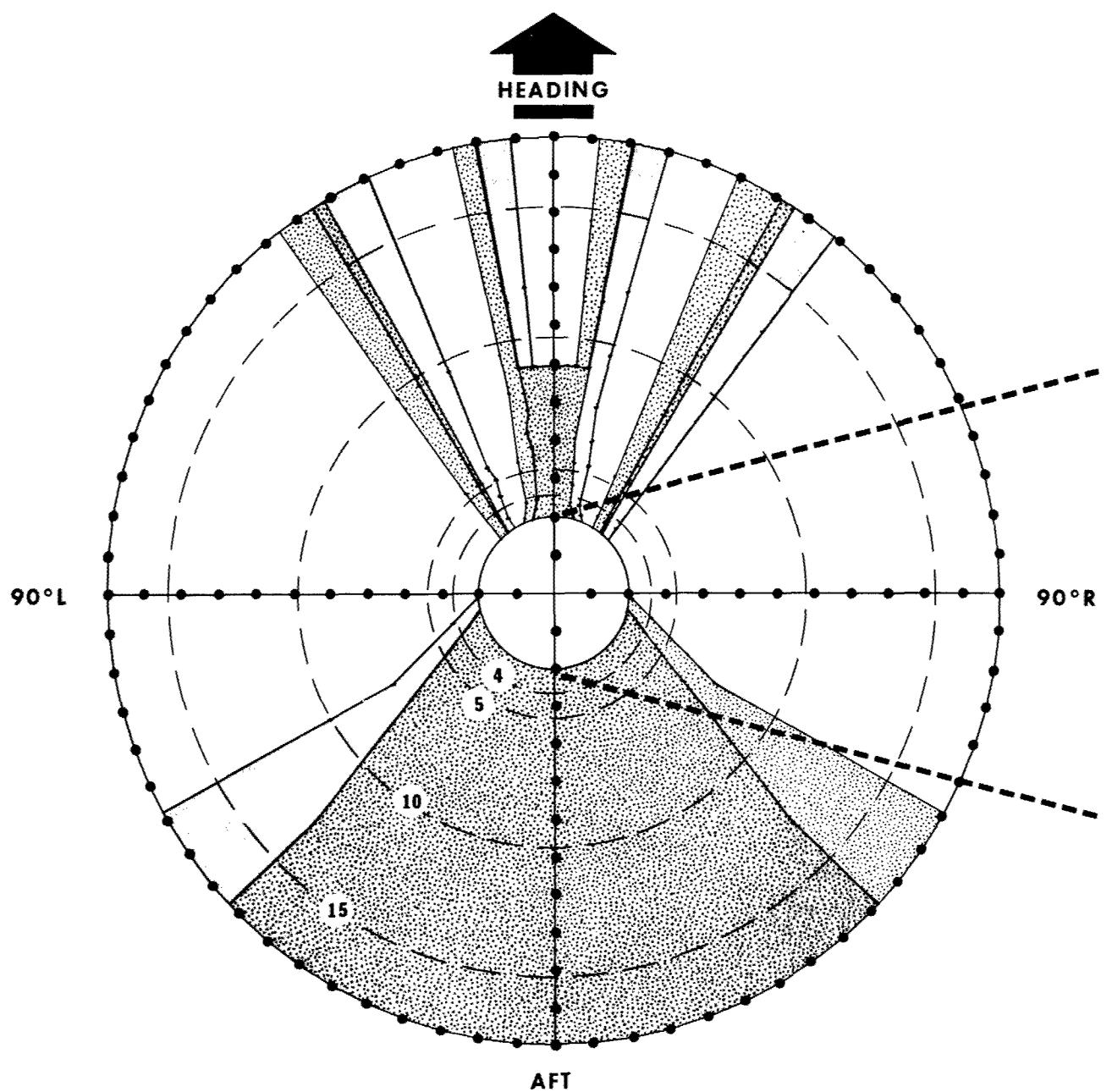


Left Eye



Both Eyes

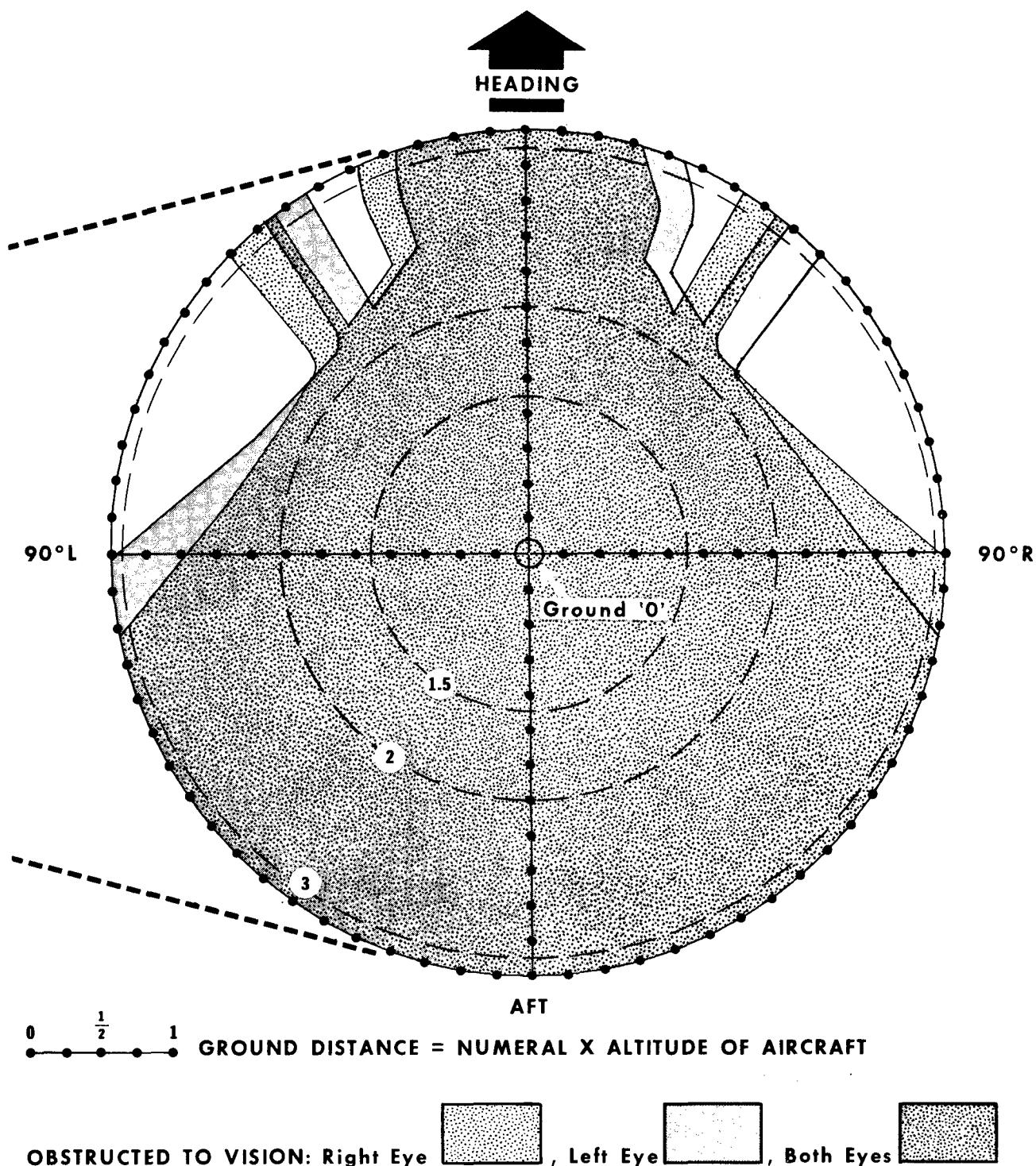


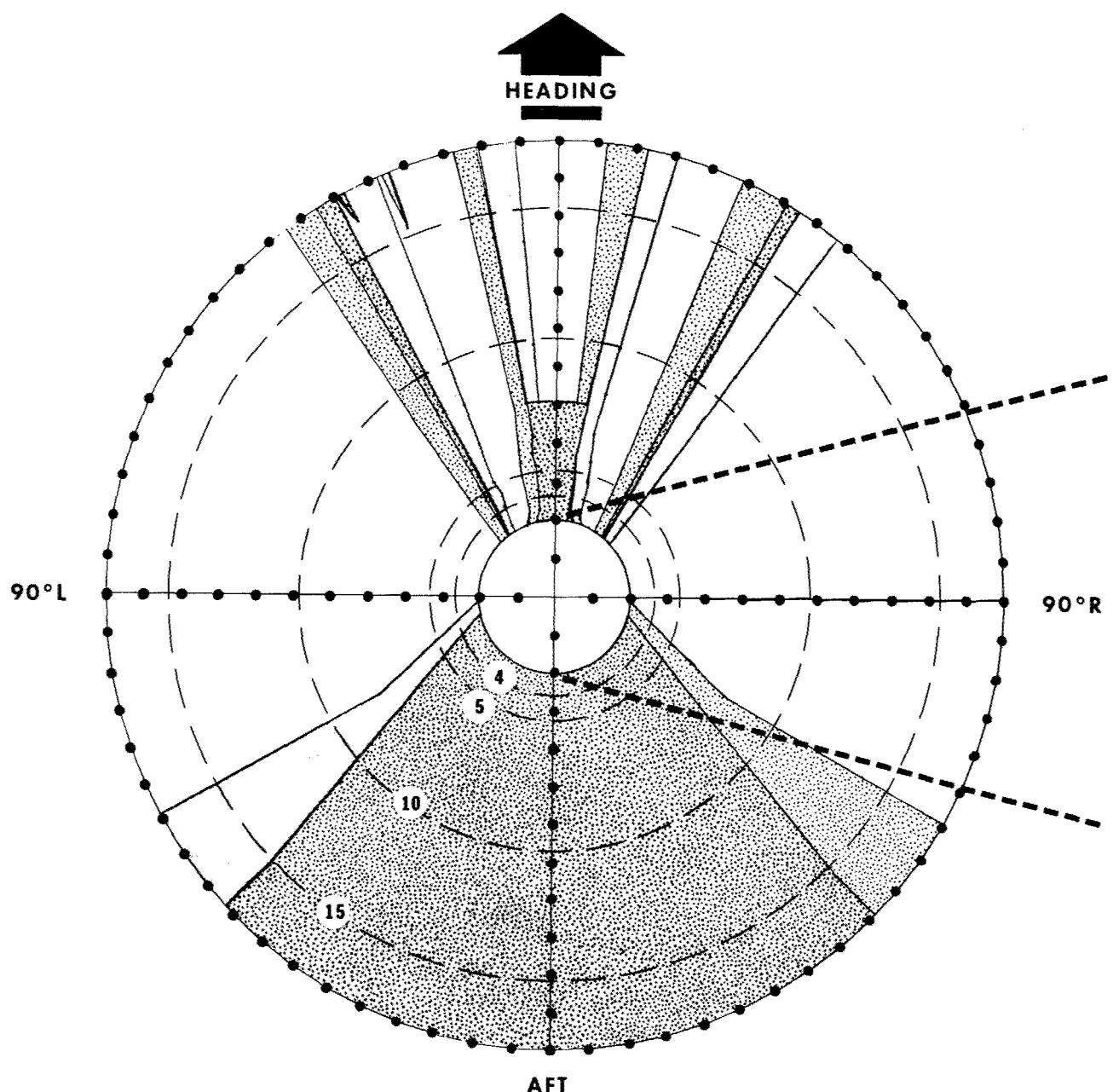


**SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT**

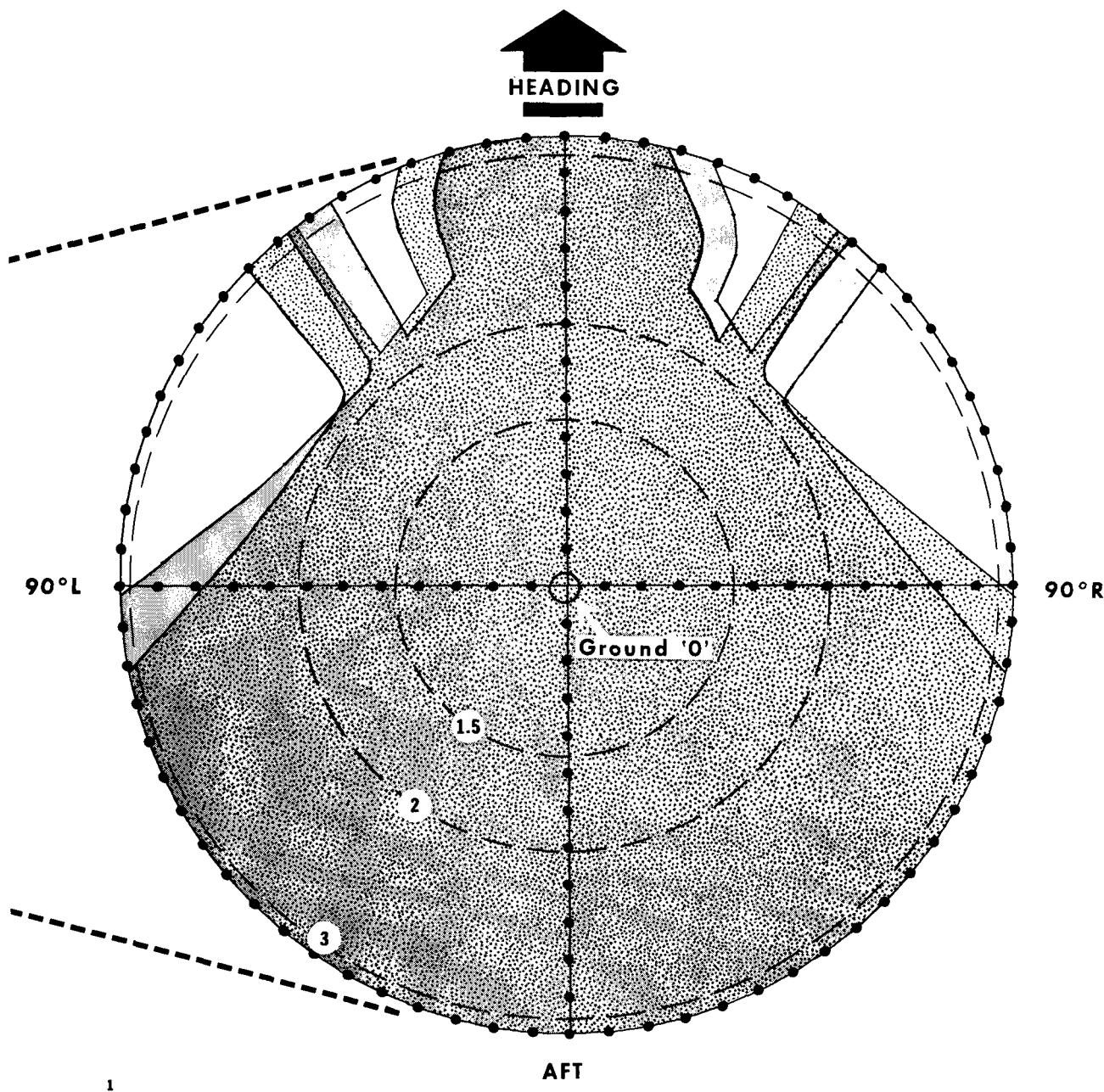
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 46. Ground Visibility Plots
- RF-4C Front - 1° Pitch Down**





**Figure 47. Ground Visibility Plots
-RF-4C Front - 2° Pitch Down**



OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

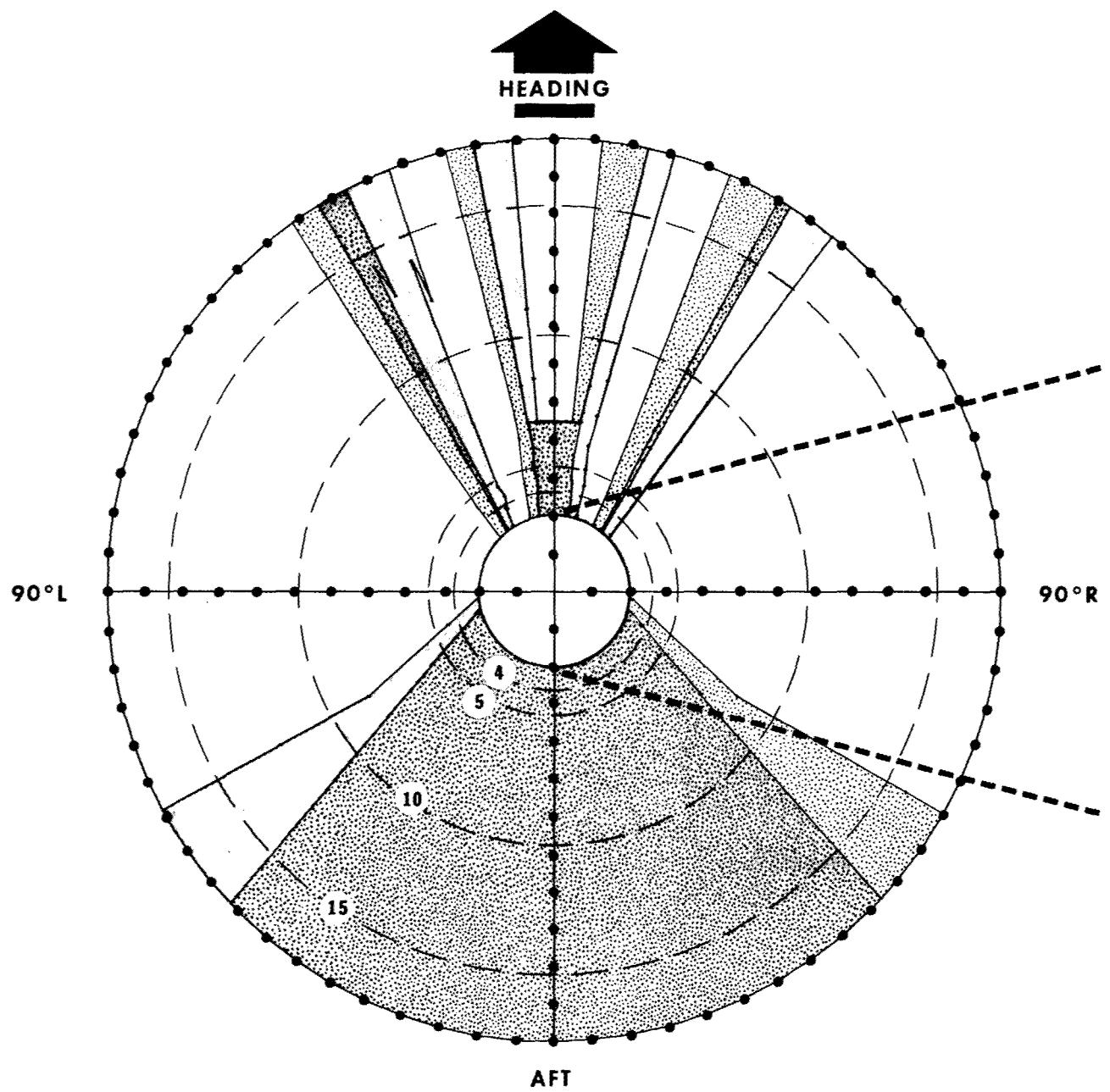
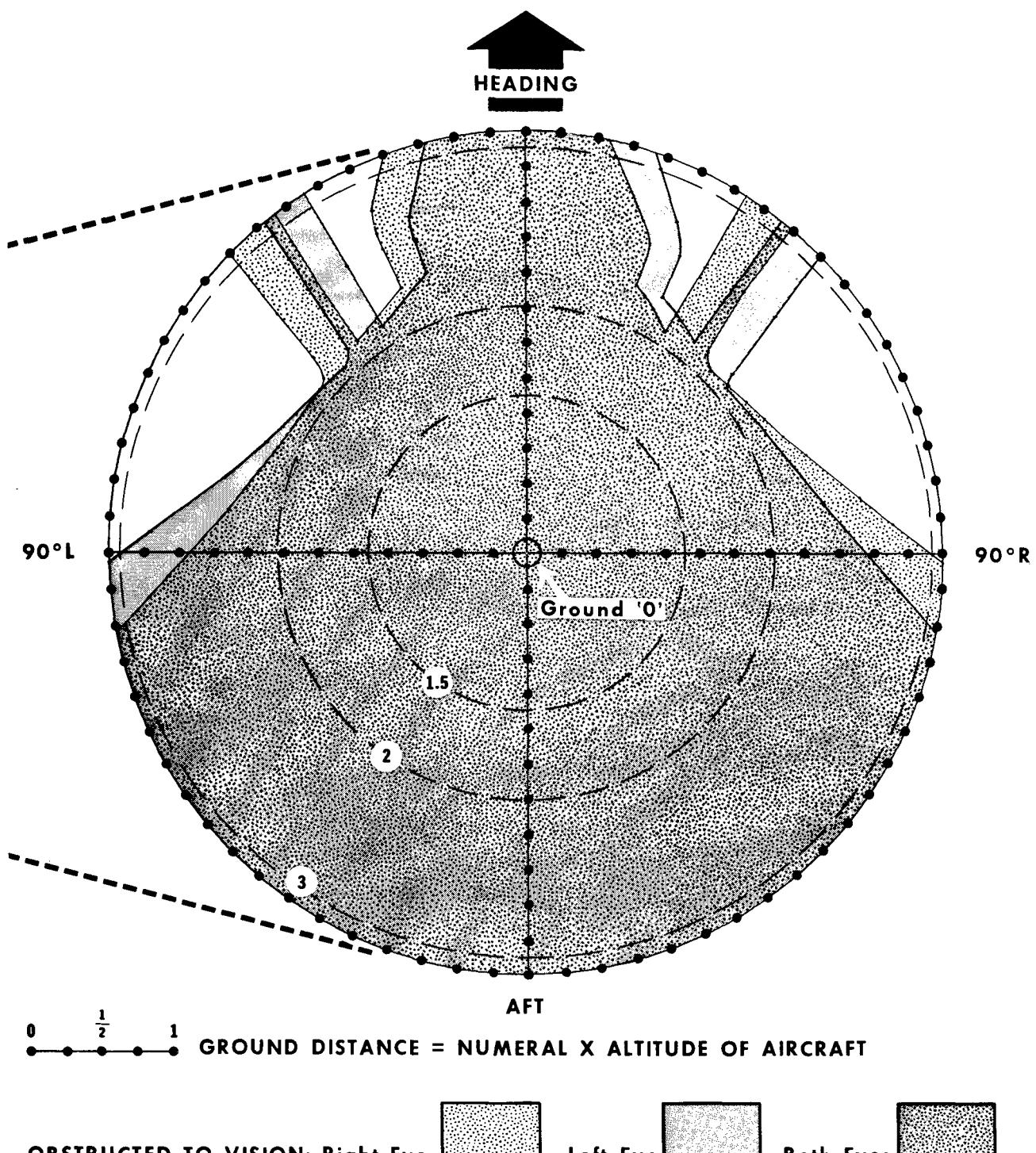
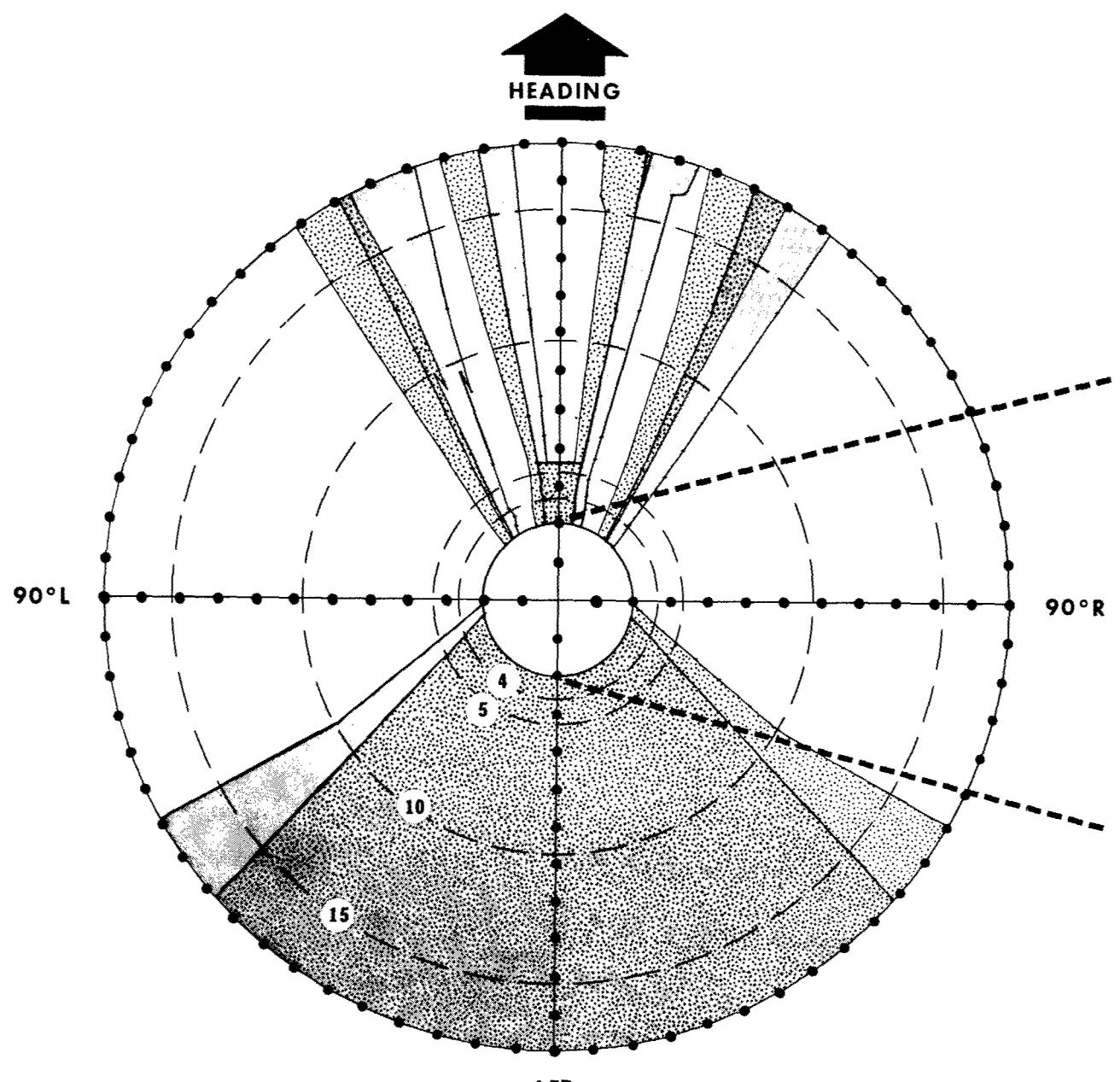


Figure 48. Ground Visibility Plots
- RF-4C Front - 3° Pitch Down

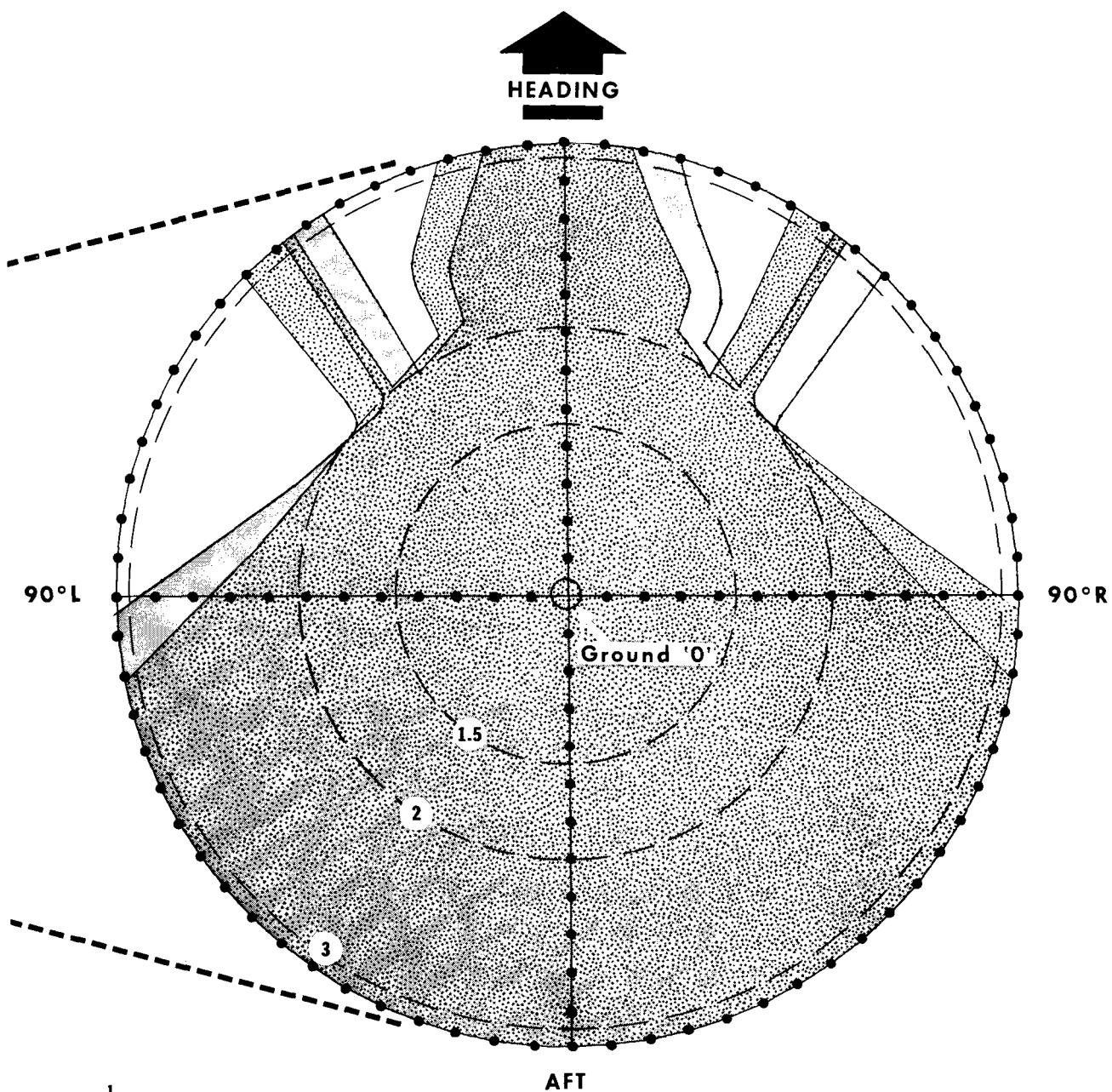




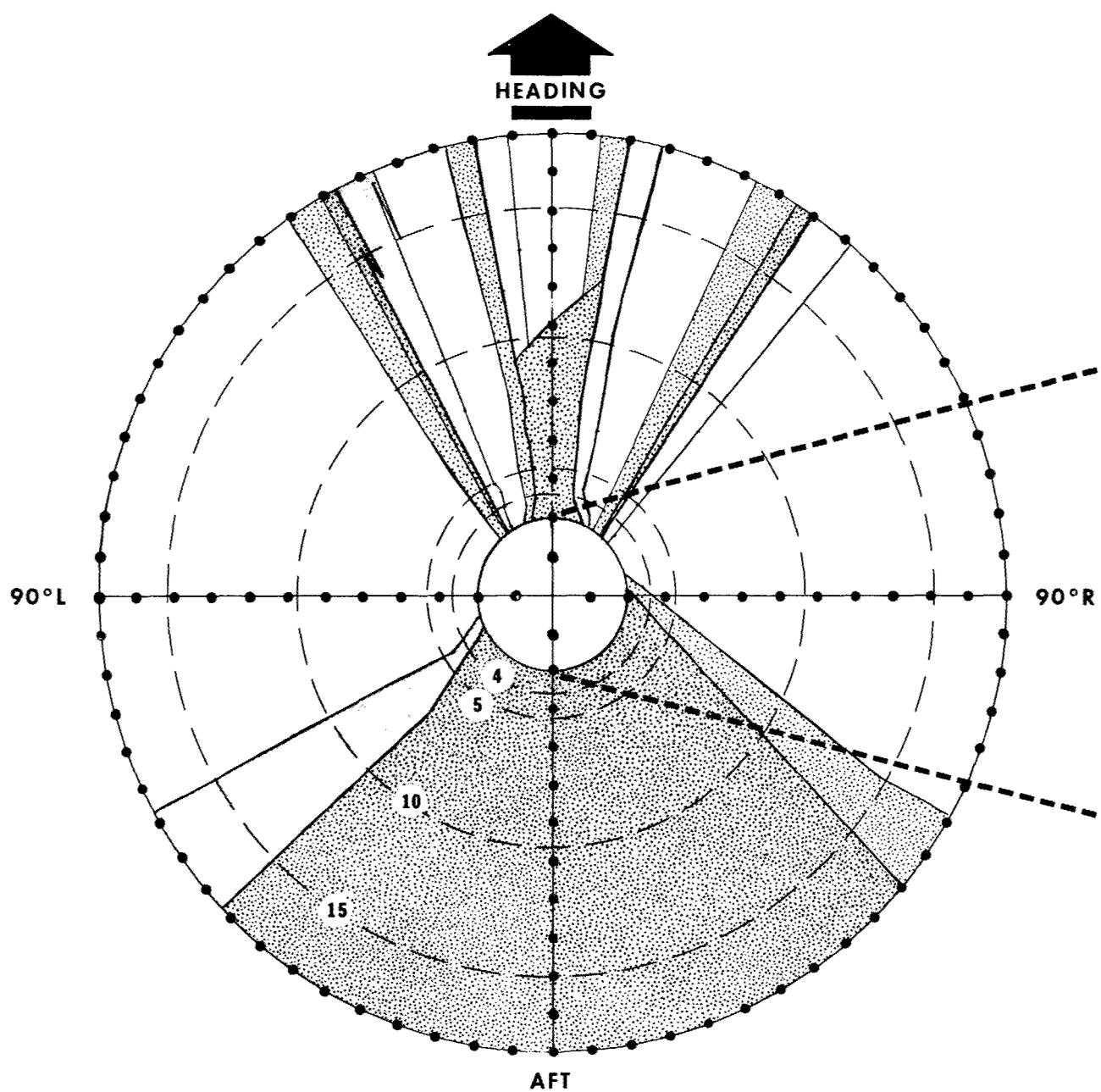
SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

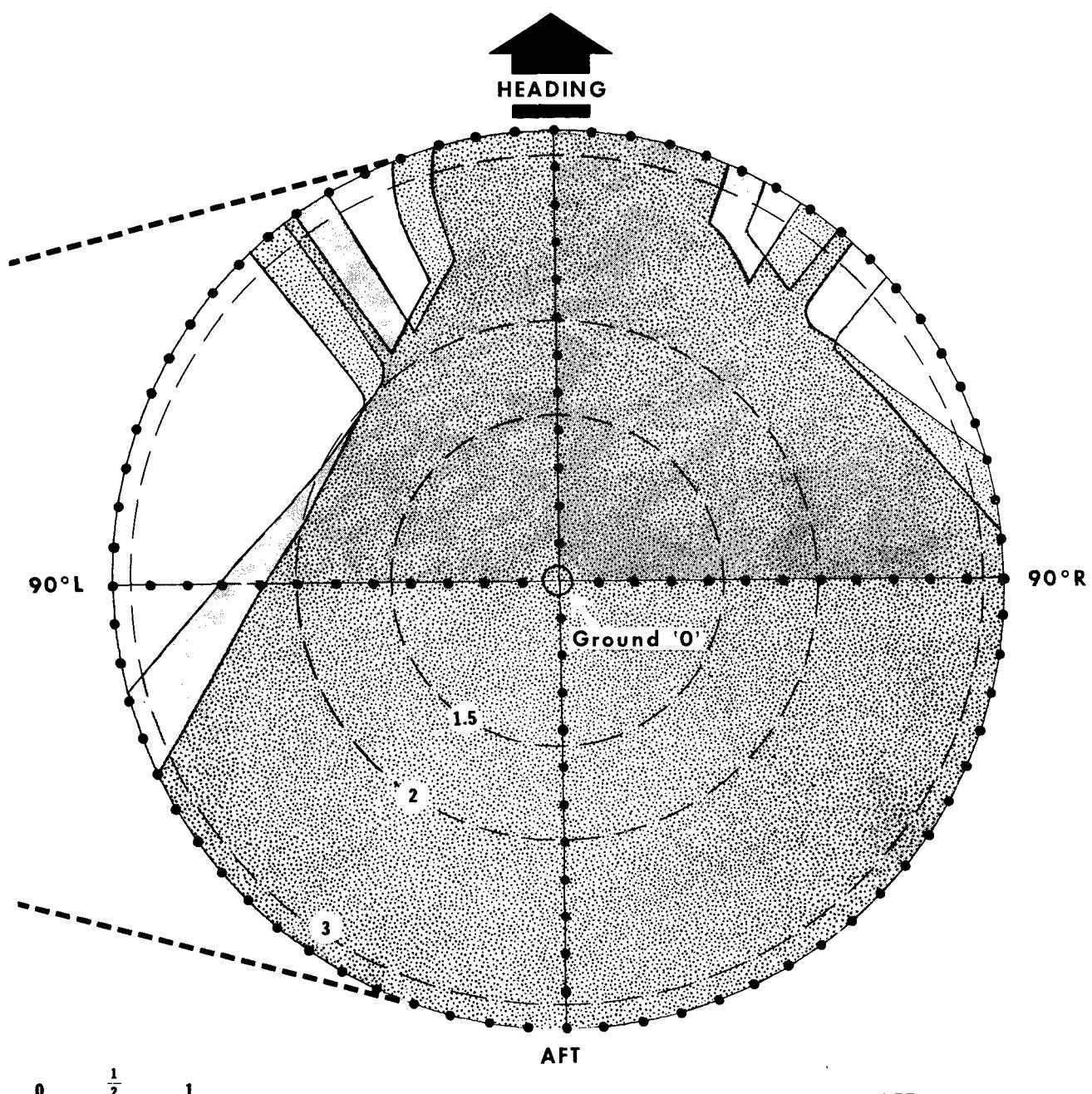
Figure 49. Ground Visibility Plots
- RF-4C Front - 5° Pitch Down



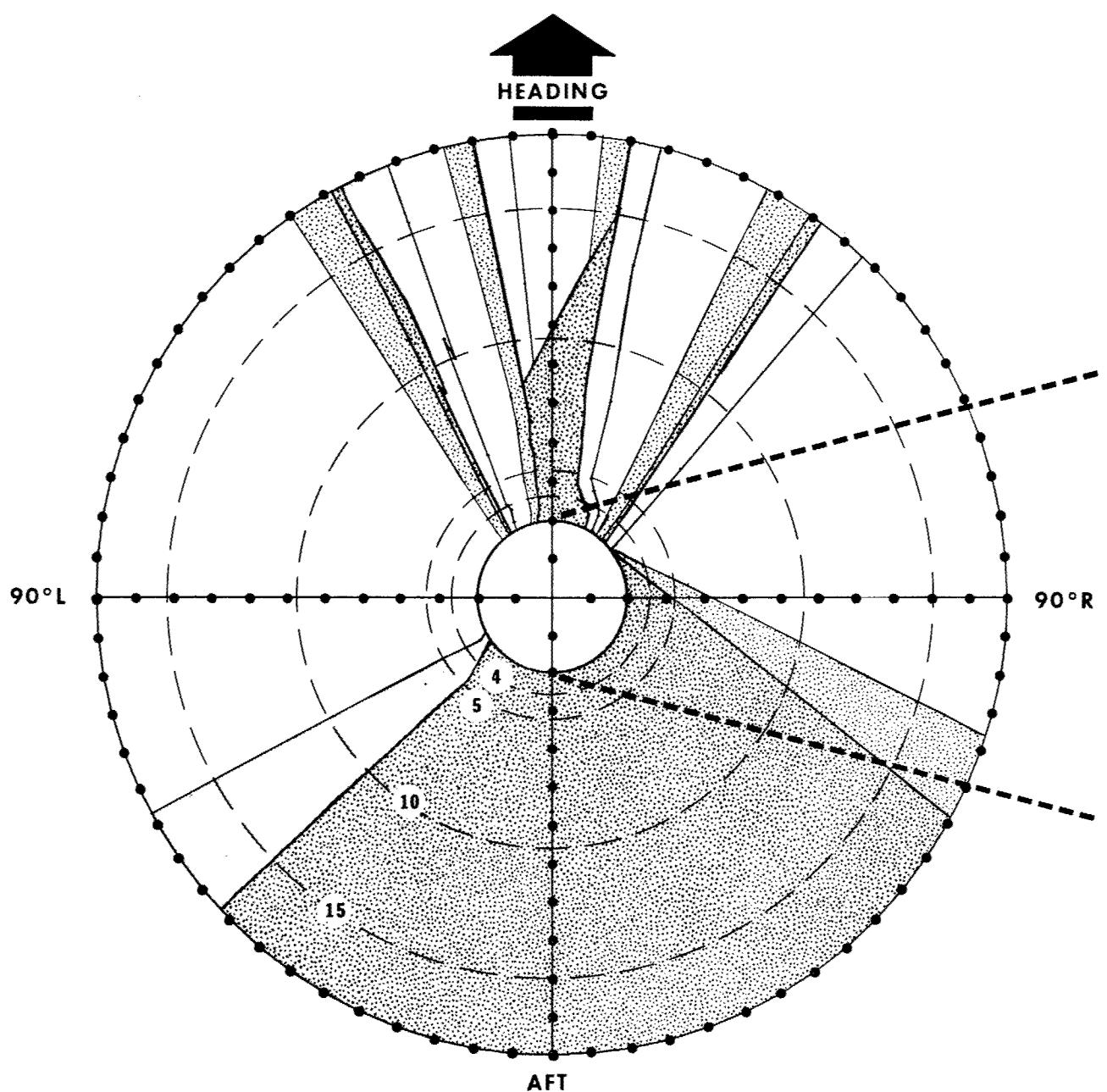
OBSTRUCTED TO VISION: Right Eye , Left Eye Both Eyes



**Figure 50. Ground Visibility Plots
- RF-4C Front - 5° Roll Left**



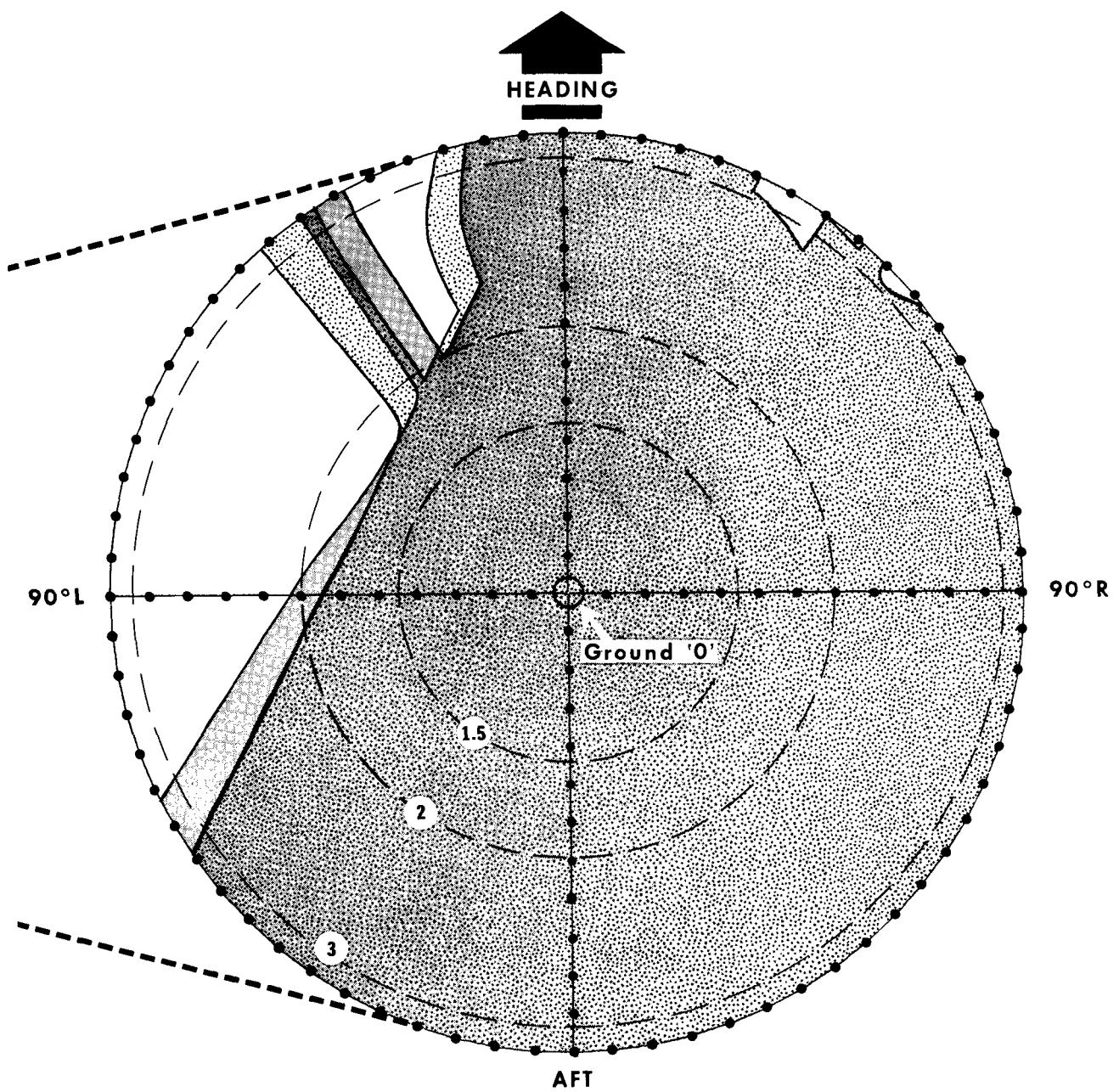
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes



SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

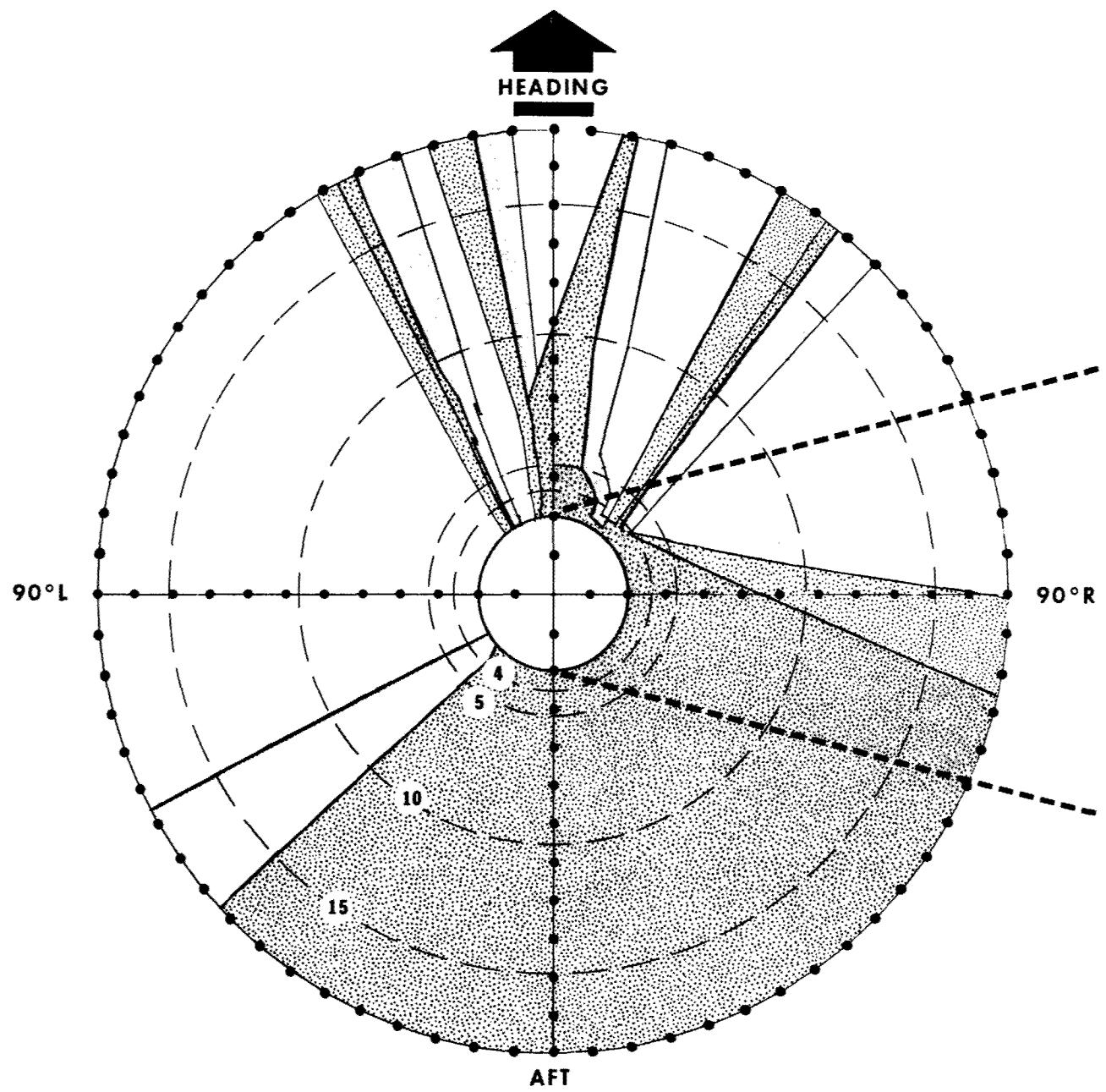
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 51. Ground Visibility Plots
- RF-4C Front - 10° Roll Left**



GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

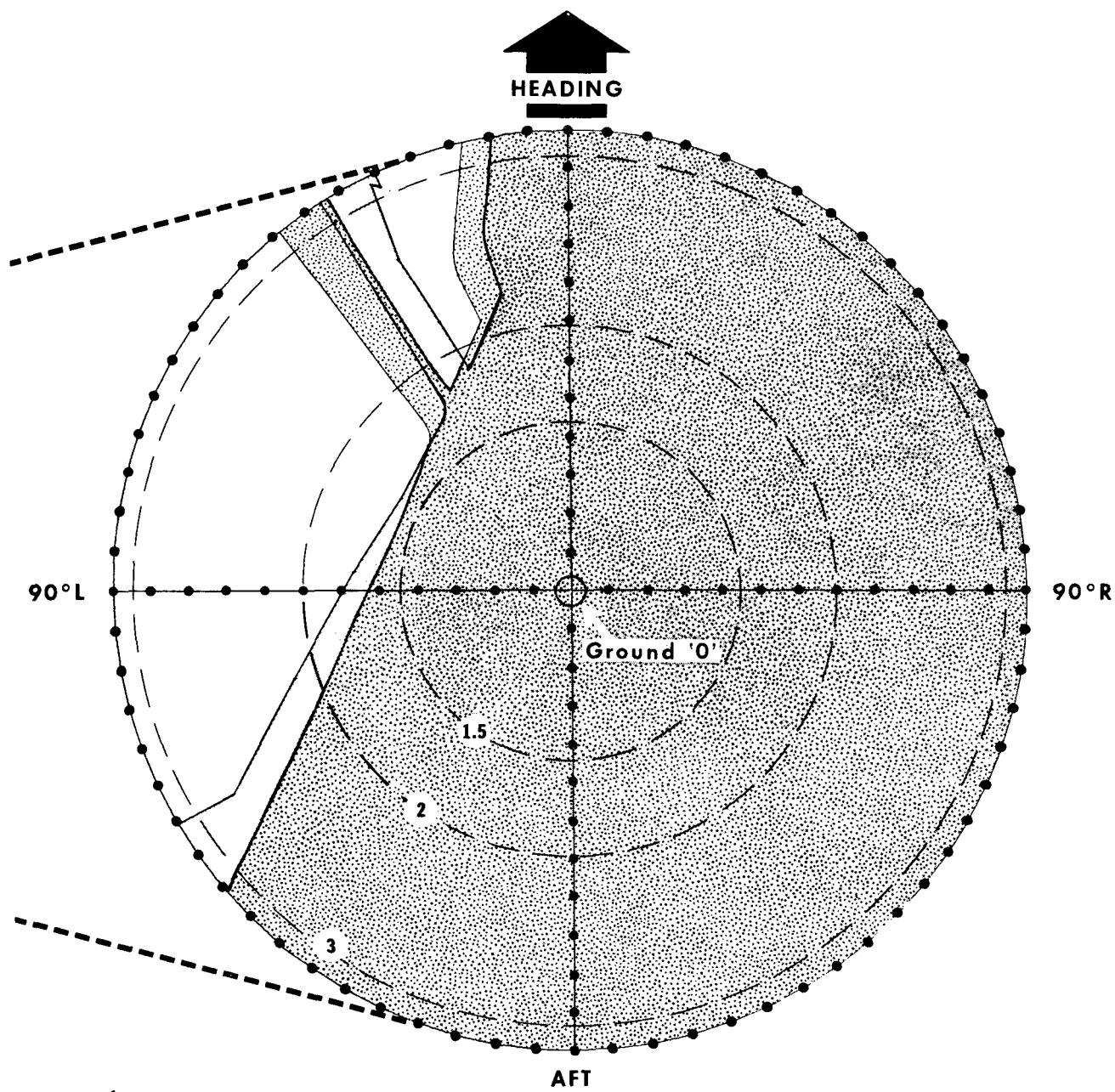
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes



**SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT**

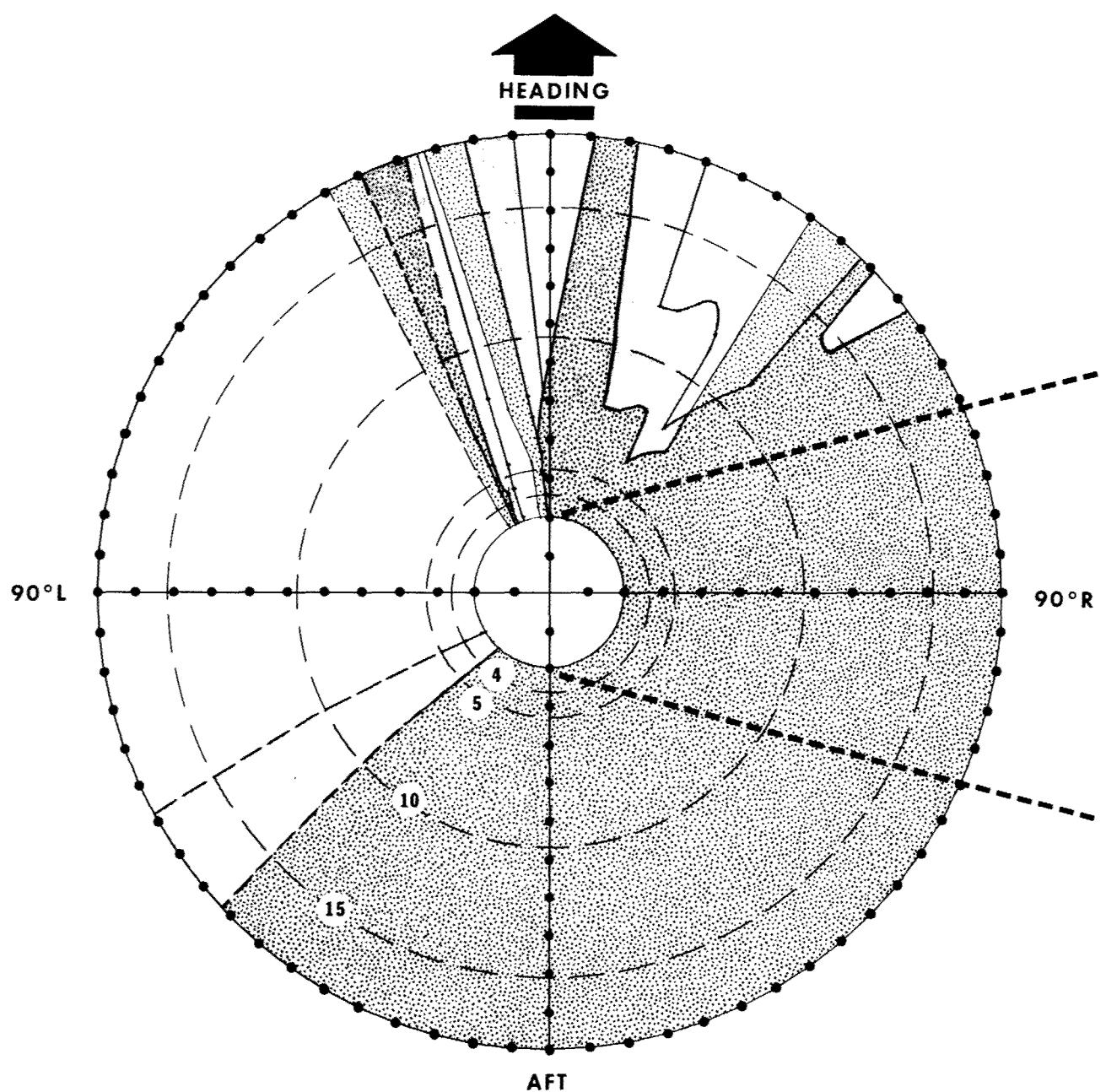
0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 52. Ground Visibility Plots
- RF-4C Front - 15° Roll Left**



0 $\frac{1}{2}$ 1 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

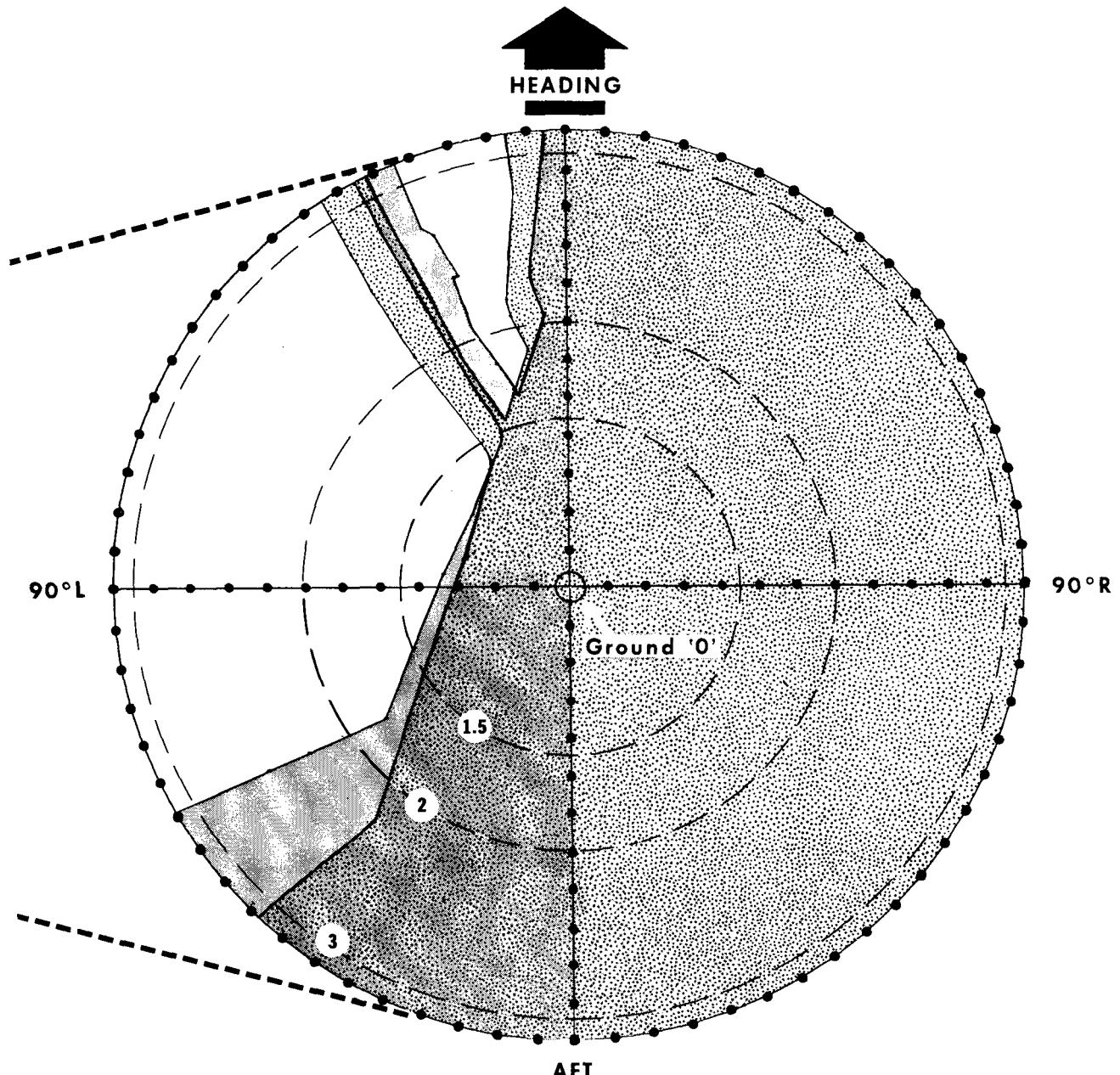
OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes



SLANT RANGE TO POINT ON GROUND ALONG DASHED CIRCLES =
NUMERAL X ALTITUDE OF AIRCRAFT

0 3 6 GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

**Figure 53. Ground Visibility Plots
- RF-4C Front - 30° Roll Left**



GROUND DISTANCE = NUMERAL X ALTITUDE OF AIRCRAFT

OBSTRUCTED TO VISION: Right Eye , Left Eye , Both Eyes

TABLE 19

PERCENT OF TOTAL GROUND AREA VISIBLE* WITHIN SELECTED GROUND RADII AND AT DIFFERENT ATTITUDES OF PITCH AND ROLL—RF-4C FRONT

<i>Pitch</i>	<i>Percent of Total Ground Area Visible</i>	
	18 X Alt	3 X Alt
+20°	50.8%	3.3%
+17°	51.8%	3.4%
+13°	52.5%	3.8%
+10°	54.3%	5.9%
+ 7°	54.6%	8.1%
+ 5°	55.1%	9.9%
+ 3°	55.7%	12.1%
+ 2°	56.5%	13.3%
+ 1°	57.2%	13.6%
0°	58.5%	14.9%
- 1°	58.3%	15.5%
- 2°	58.4%	16.3%
- 3°	58.5%	17.3%
- 5°	59.2%	19.6%
<i>Roll**</i>		
L5°	59.4%	15.7%
L10°	56.6%	17.7%
L15°	51.8%	20.3%
L30°	39.2%	25.8%

*Right Eye

**Left Roll

TABLE 20

PERCENT OF TOTAL GROUND AREA VISIBLE* WITHIN SELECTED GROUND RADII AND AT DIFFERENT ATTITUDES OF PITCH AND ROLL—RF-4C FRONT

	<i>Pitch</i>	<i>Percent of Total Ground Area Visible</i>		
	15 X Alt	10 X Alt	5 X Alt	3 X Alt
+ 20°	48.3%	43.6%	26.5%	2.0%
+ 17°	49.2%	45.9%	27.3%	1.8%
+ 13°	51.7%	47.3%	28.3%	2.5%
+ 10°	53.6%	48.5%	29.4%	4.2%
+ 7°	54.7%	50.0%	30.5%	6.8%
+ 5°	55.9%	50.5%	31.4%	8.2%
+ 3°	56.3%	51.0%	32.7%	10.3%
+ 2°	56.5%	51.4%	33.6%	11.6%
+ 1°	57.0%	51.5%	33.9%	12.3%
0°	57.2%	52.1%	34.8%	13.8%
- 1°	58.2%	52.7%	35.7%	14.4%
- 2°	58.6%	53.2%	37.6%	15.4%
- 3°	58.7%	53.6%	38.4%	16.4%
- 5°	58.8%	54.4%	41.6%	18.0%
<i>Roll**</i>				
L5°	56.8%	51.0%	34.8%	13.5%
L10°	56.2%	47.4%	33.0%	16.0%
L15°	49.5%	43.7%	31.6%	19.5%
L30°	37.9%	35.0%	30.9%	22.1%

*Right Eye

**Left Roll

APPENDIX I

THE BINOCULAR COCKPIT VISIBILITY CAMERA— DESCRIPTION AND OPERATION

The camera incorporates two Wollensak 65 mm, f 6.8, Raptar wide-angle lenses, each giving coverage of $88\frac{1}{2}$ °. The distance between the optical axes is $2\frac{1}{2}$ inches, essentially the mean human interpupillary distance. The point of infinity of the lenses is 200 feet. This permits the horizon to be resolved and allows the binocular effect for calculating single and dual eye visibility, since all objects nearer than 200 feet appear increasingly divergent.

When in operation, the camera rotates horizontally at the rate of 10° per second. At the same time, the film moves past the exposure slit at the rate of 0.465 inches per second. The shutter remains open during the entire period of camera rotation. The lenses are located 3-1/3 inches forward from the axis of rotation to simulate the average eye-position relative to the axis of horizontal rotation of the human head. At intervals of 5° of horizontal rotation, a vertical grid is exposed on the film through a 0.002-inch vertical slit with an argon lamp. A horizontal grid is exposed through a plexiglass grid over the exposure slit and is scaled to represent 5° of vertical displacement.¹

The following conditions were met to ensure accurate and easily interpretable photographs:

- Each aircraft was leveled longitudinally and laterally. When necessary, the wings were anchored to reduce buffeting.
- The aircraft were placed and oriented in such a direction as to produce relative light values in and outside the cockpit so that on a photographic print, obstructions to vision out of the cockpit were as dark and sharp as possible against a relatively light background.
- When possible, the aircraft were located in such a position that permitted uninterrupted view of a distant horizon in front and to the sides.
- The aircraft cockpit was equipped only with instruments normally found in that model. Special emphasis was placed on equipment affecting vision without the cockpit.
- The camera quadripod was placed on the seat and leveled.
- The camera was installed level on the quadripod so that the lenses coincided with the eye point as defined in HIAD, FAR-25, or by the manufacturer.
- A photograph was taken covering approximately 360°, beginning to the left of what would be immediately behind the pilot and sweeping from there, left to right, around to the right rear.

¹For complete information regarding the Cockpit Visibility Camera and its operation, see reference 1.

APPENDIX II

GROUND VISIBILITY PLOT-TABULAR DATA, SELECTED AIRCRAFT

Table 21. GROUND VISIBILITY PLOT - TABULAR DATA

A-1E PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 130.68	HORIZON	HORIZON	L 137.22	HORIZON	HORIZON
L 130.34	16.16	16.19	L 136.81	16.30	16.33
L 130.00	11.43	11.47	L 136.77	11.43	11.47
L 129.55	5.67	5.76	L 135.56	5.67	5.76
L 128.26	2.30	2.51	L 135.00	2.31	2.52
L 125.00	2.24	2.46	L 129.22	2.05	2.28
L 117.22	2.75	2.92	L 117.82	2.75	2.92
L 110.00	3.73	3.86	L 110.00	3.73	3.86
L 103.04	5.67	5.76	L 102.93	5.67	5.76
L 100.00	6.13	6.21	L 100.00	6.11	6.19
L 95.00	6.66	6.73	L 95.00	6.66	6.73
L 92.05	6.42	6.50	L 92.05	6.40	6.48
L 89.56	5.67	5.76	L 90.64	5.67	5.76
L 89.13	5.39	5.49	L 90.00	5.34	5.43
L 87.60	3.73	3.86	L 88.47	3.73	3.86
L 85.00	2.43	2.63	L 86.08	2.41	2.61
L 78.64	2.46	2.65	L 80.00	2.45	2.65
L 78.64	2.34	2.55	L 80.00	2.34	2.55
L 84.50	2.02	2.25	L 85.86	2.30	2.51
L 75.10	2.05	2.28	L 85.00	2.00	2.24
L 75.00	1.99	2.23	L 76.52	2.04	2.27
L 83.18	1.92	2.16	L 76.42	1.97	2.21
L 80.00	1.49	1.79	L 84.50	1.91	2.15
L 75.00	1.50	1.80	L 82.57	1.52	1.82
L 47.34	2.14	2.37	L 75.00	1.56	1.86
L 48.40	1.91	2.16	L 55.00	2.04	2.27
L 49.44	2.37	2.57	L 56.28	1.87	2.12
L 49.05	2.75	2.92	L 57.82	2.37	2.57
L 47.12	3.59	3.72	L 57.46	2.75	2.92
L 50.00	1.80	2.06	L 53.61	3.73	3.86
L 50.45	2.36	2.56	L 57.78	1.78	2.04
L 50.56	2.75	2.92	L 59.56	2.36	2.56
L 48.60	3.73	3.86	L 59.05	2.75	2.92
L 46.66	4.46	4.57	L 55.00	4.07	4.19
L 45.81	11.43	11.47	L 53.72	4.39	4.50

.....CONTINUED

GROUND VISIBILITY PLOT - TABULAR DATA

A-1E PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 45.53	16.03	16.06	L 52.72	11.43	11.47
L 45.00	HORIZON	HORIZON	L 52.32	16.30	16.33
L 36.92	HORIZON	HORIZON	L 51.70	HORIZON	HORIZON
L 37.60	16.21	16.24	L 44.05	HORIZON	HORIZON
L 38.04	11.43	11.47	L 44.88	15.22	15.25
L 39.28	3.73	3.86	L 45.00	11.43	11.47
L 40.00	2.08	2.31	L 45.60	5.67	5.76
L 40.00	1.68	1.95	L 46.62	2.75	2.92
L 37.17	1.78	2.04	L 46.21	1.70	1.97
L 40.00	2.08	2.31	L 42.60	1.79	2.05
L 39.41	2.11	2.34	L 45.50	2.10	2.32
L 36.17	1.80	2.06	L 45.00	2.14	2.37
L 29.22	2.18	2.40	L 41.95	1.80	2.06
L 21.38	4.35	4.47	L 34.04	2.11	2.34
L 22.39	5.00	5.10	L 28.18	4.45	4.57
L 22.08	5.67	5.76	L 28.86	4.95	5.05
L 21.10	6.20	6.28	L 28.52	5.67	5.76
L 20.00	6.20	6.28	L 27.27	6.27	6.35
L 2.11	11.43	11.47	L 26.02	6.35	6.43
L 16.18	15.38	15.41	L 23.82	11.43	11.47
L 11.73	HORIZON	HORIZON	L 23.19	14.56	14.59
L 2.50	HORIZON	HORIZON	L 19.55	HORIZON	HORIZON
R 12.23	HORIZON	HORIZON	L 11.30	HORIZON	HORIZON
R 11.27	102.31	102.31	L 8.69	HORIZON	HORIZON
R 12.55	27.01	27.03	R 10.00	19.67	19.70
R 13.61	19.55	19.97	R 12.06	34.50	34.52
R 17.09	18.34	18.37	R 12.12	HORIZON	HORIZON
R 18.62	39.50	39.52	R 16.41	HORIZON	HORIZON
R 20.00	HORIZON	HORIZON	R 16.41	19.67	19.70
R 21.97	HORIZON	HORIZON	R 0.	HORIZON	HORIZON
R 52.91	HORIZON	HORIZON	R 5.88	HORIZON	HORIZON
R 54.17	10.84	10.89	R 5.00	92.41	92.41
R 55.00	9.79	9.84	R 6.44	36.72	36.73
R 55.00	6.83	6.90	R 17.09	19.67	19.70
R 60.00	5.93	6.01	R 18.47	HORIZON	HORIZON

.....CONTINUED

GROUND VISIBILITY PLOT - TABULAR DATA

A-1E PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 61.49	5.67	5.76	R 20.00	HORIZON	HORIZON
R 61.70	3.97	4.09	R 18.52	17.94	17.97
R 70.00	3.73	3.86	R 25.85	15.26	15.29
R 72.87	4.22	4.34	R 27.57	19.67	19.70
R 72.87	5.67	5.76	R 28.04	HORIZON	HORIZON
R 72.87	11.43	11.47	R 32.12	HORIZON	HORIZON
R 71.48	HORIZON	HORIZON	R 32.64	21.13	21.15
R 22.91	HORIZON	HORIZON	R 35.00	19.14	19.17
R 22.91	17.19	17.21	R 40.00	13.75	13.78
R 30.88	15.38	15.41	R 44.69	11.43	11.47
R 31.54	24.47	24.49	R 45.44	15.26	15.29
R 32.09	HORIZON	HORIZON	R 49.34	HORIZON	HORIZON
R 36.25	HORIZON	HORIZON	R 50.42	10.56	10.61
R 36.66	23.96	23.98	R 51.25	9.13	9.18
R 40.00	16.30	16.33	R 51.25	6.66	6.73
R 43.75	14.56	14.59	R 56.84	6.01	6.10
R 47.65	12.21	12.26	R 58.18	5.56	5.65
R 48.36	14.16	14.19	R 58.33	3.92	4.05

Table 22. GROUND VISIBILITY PLOT - TABULAR DATA

A-1E COPILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 65.88	HORIZON	HORIZON	L 69.44	HORIZON	HORIZON
L 66.33	14.86	14.89	L 69.44	14.48	14.52
L 66.33	11.43	11.47	L 69.44	11.43	11.47
L 66.36	3.50	3.64	L 70.00	3.52	3.66
L 61.08	3.59	3.72	L 64.13	3.56	3.70
L 58.04	11.43	11.47	L 61.73	11.43	11.47
L 57.66	13.75	13.78	L 61.30	13.75	13.78
L 56.30	45.83	45.84	L 60.53	29.07	29.09
L 55.00	69.03	69.03	L 59.44	69.03	69.03
L 49.13	34.50	34.52	L 52.95	27.53	27.55
L 49.13	HORIZON	HORIZON	L 52.95	HORIZON	HORIZON
L 39.02	HORIZON	HORIZON	L 41.36	HORIZON	HORIZON
L 40.00	HORIZON*	HORIZON*	L 42.27	92.41	92.41
L 40.00	22.90	22.92	L 42.27	34.50	34.52
L 25.00	10.56	10.61	L 30.00	10.56	10.61
L 15.00	10.56	10.61	L 19.22	10.56	10.61
L 17.95	HORIZON	HORIZON	L 20.00	13.75	13.78
L 16.05	HORIZON	HORIZON	L 21.97	HORIZON	HORIZON
L 14.13	14.48	14.52	L 20.00	HORIZON	HORIZON
L 14.13	45.83	45.84	L 18.40	42.43	42.44
L 8.86	45.83	45.84	L 15.45	42.43	42.44
L 8.03	15.26	15.29	L 13.40	42.43	42.44
L 7.72	11.43	11.47	L 12.60	15.26	15.29
L 7.04	9.13	9.18	L 12.39	11.43	11.47
R 6.08	9.13	9.18	L 11.84	9.13	9.18
R 7.60	5.34	5.44	R 2.44	9.13	9.18
R 13.04	5.34	5.44	R 2.44	5.45	5.54
R 15.44	11.43	11.47	R 10.00	5.45	5.54
R 16.18	18.34	18.37	R 10.99	11.43	11.47
R 17.50	HORIZON	HORIZON	R 11.63	19.67	19.70
R 14.66	5.34	5.44	R 12.46	HORIZON	HORIZON
R 21.85	3.73	3.86	R 16.36	3.73	3.86
R 28.75	2.89	3.06	R 23.15	2.81	2.98
R 30.00	2.46	2.65	R 24.55	2.43	2.63
R 48.14	1.68	1.96	R 41.11	1.67	1.95

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

A-1E COPILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 47.50	2.75	2.92	R 41.33	2.14	2.37
R 46.92	3.61	3.75	R 40.00	3.73	3.86
R 42.17	3.07	3.23	R 38.47	7.59	7.66
R 40.00	3.73	3.86	R 39.07	3.73	3.86
R 40.00	11.43	11.47	R 35.00	3.06	3.22
R 39.45	14.48	14.52	R 33.12	3.13	3.29
R 38.04	HORIZON	HORIZON	R 32.34	3.73	3.86
R 53.75	HORIZON	HORIZON	R 31.91	5.67	5.76
R 54.19	14.58	15.01	R 31.11	11.43	11.47
R 54.41	11.43	11.47	R 30.74	15.26	15.29
R 55.00	5.67	5.76	R 30.00	HORIZON	HORIZON
R 55.21	4.70	4.81	R 46.33	HORIZON	HORIZON
R 60.00	3.54	3.68	R 47.06	15.26	15.29
R 61.61	2.52	2.71	R 47.39	11.43	11.47
R 60.90	2.14	2.37	R 48.04	5.67	5.76
R 58.26	1.85	2.11	R 48.04	4.69	4.79
R 59.34	2.14	2.37	R 51.77	3.73	3.86
R 60.00	2.52	2.71	R 52.77	2.55	2.74
R 58.97	3.37	3.51	R 51.95	1.76	2.02
R 55.00	3.92	4.05	R 48.47	3.93	4.05
R 55.96	2.14	2.37	R 48.91	2.14	2.37
R 58.36	1.85	2.10	R 50.41	1.85	2.11
R 84.34	1.48	1.78	R 52.39	2.57	2.76
R 86.81	1.94	2.18	R 50.66	3.45	3.59
R 79.41	2.02	2.26	R 82.17	1.43	1.74
R 79.66	2.11	2.34	R 85.45	1.96	2.20
R 87.44	2.03	2.26	R 77.55	2.05	2.28
R 88.55	2.37	2.57	R 77.66	2.11	2.34
R 82.28	2.46	2.65	R 86.11	2.03	2.27
R 82.38	2.52	2.72	R 87.44	2.37	2.57
R 88.88	2.50	2.69	R 80.86	2.43	2.63
R 90.00	2.75	2.92	R 80.86	2.55	2.74
R 91.08	3.73	3.86	R 87.77	2.49	2.68
R 92.50	5.67	5.76	R 88.55	2.75	2.92
R 95.00	7.37	7.43	R 90.31	3.73	3.86

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GROUND VISIBILITY PLOT - TABULAR DATA

A-1E COPILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 57.82	7.37	7.43	R 92.60	5.67	5.76
R 100.00	7.30	7.37	R 95.00	6.95	7.02
R 105.00	6.27	6.35	R 97.22	7.10	7.17
R 110.00	4.40	4.51	R 100.00	6.83	6.90
R 115.00	3.46	3.60	R 105.00	6.20	6.28
R 120.00	2.75	2.92	R 110.00	4.40	4.51
R 133.33	1.93	2.18	R 120.90	2.75	2.92
R 135.00	2.10	2.32	R 130.00	2.08	2.31
R 135.00	3.73	3.86	R 130.00	3.73	3.86
R 137.37	11.43	11.47	R 131.22	11.43	11.47
R 137.66	16.16	16.19	R 131.63	16.16	16.19
R 139.00	HORIZON	HORIZON	R 132.50	HORIZON	HORIZON

Table 23. GROUND VISIBILITY PLOT - TABULAR DATA
A-7A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 140.80	HORIZON	HORIZON	L 143.30	HORIZON	HORIZON
L 133.97	14.98	15.01	L 143.50	15.26	15.29
L 132.24	11.43	11.47	L 141.55	11.43	11.47
L 128.02	5.67	5.76	L 137.33	5.67	5.76
L 124.28	3.34	3.49	L 135.80	3.99	4.12
L 125.80	2.43	2.63	L 130.00	3.10	3.26
L 117.90	1.48	1.79	L 134.26	2.99	3.16
L 95.80	1.13	1.51	L 125.80	1.49	1.79
L 54.43	1.19	1.55	L 100.80	1.11	1.49
L 48.41	1.43	1.74	L 61.70	1.19	1.55
L 43.26	2.14	2.37	L 54.89	1.43	1.74
L 38.98	5.67	5.76	L 48.77	2.23	2.44
L 35.80	10.56	10.61	L 45.21	5.67	5.76
L 33.61	9.63	9.68	L 42.53	10.78	10.82
L 32.67	11.43	11.47	L 40.23	8.98	9.04
L 31.85	17.19	17.21	L 39.43	11.43	11.47
L 29.13	HORIZON	HORIZON	L 38.59	16.16	16.19
L 19.96	HORIZON	HORIZON	L 35.80	HORIZON	HORIZON
L 23.98	16.49	16.52	L 25.80	HORIZON	HORIZON
L 25.34	11.43	11.47	L 30.80	14.44	14.48
L 29.20	5.67	5.76	L 31.42	11.43	11.47
L 34.78	2.75	2.92	L 35.24	5.67	5.76
L 40.04	1.33	1.67	L 43.30	2.14	2.37
L 16.75	2.28	2.49	L 46.59	1.32	1.65
L 17.58	2.49	2.68	L 21.25	2.25	2.47
L 6.14	3.17	3.32	L 22.16	2.50	2.69
L 10.80	5.67	5.76	L 8.98	3.13	3.29
L 12.16	7.59	7.66	L 13.79	5.67	5.76
L 11.91	11.43	11.47	L 17.10	7.71	7.77
L 12.35	17.19	17.21	L 16.75	11.43	11.47
L 11.83	HORIZON	HORIZON	L 16.51	14.98	15.01
L 6.93	HORIZON	HORIZON	L 16.27	HORIZON	HORIZON
L 7.31	16.16	16.19	L 11.83	HORIZON	HORIZON
L 7.61	11.43	11.47	L 12.35	17.19	17.21
L 7.27	5.67	5.76	L 11.91	11.43	11.47

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GROUND VISIBILITY PLOT - TABULAR DATA

A-7A PILO1, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 5.80	3.73	3.66	L 10.80	5.67	5.76
L 2.54	3.06	3.22	L 8.24	3.73	3.86
L 1.73	4.34	4.45	L 6.14	3.06	3.22
L 1.73	5.92	6.01	L 7.48	4.34	4.45
L 2.66	5.92	6.01	L 7.48	5.92	6.01
L 2.61	11.43	11.47	L 8.36	5.92	6.01
L 2.39	13.30	13.34	L 8.36	11.43	11.47
L 2.73	16.68	16.71	L 8.14	13.30	13.34
L 1.55	11.43	11.47	L 8.48	16.68	16.71
L 1.55	15.26	15.29	L 7.30	11.43	11.47
L 1.55	26.27	26.29	L 7.30	15.26	15.29
L 1.55	HORIZON	HORIZON	L 7.30	26.27	26.29
R 6.16	HORIZON	HORIZON	L 7.30	HORIZON	HORIZON
R 6.16	11.43	11.47	R 1.01	HORIZON	HORIZON
R 6.24	21.20	21.23	R 1.01	21.20	21.23
R 7.07	16.16	16.19	R 1.01	11.43	11.47
R 7.38	7.46	7.53	R 1.81	15.26	15.29
R 7.60	5.67	5.76	R 1.81	11.43	11.47
R 7.68	3.95	4.08	R 2.05	3.17	3.32
R 11.32	HORIZON	HORIZON	R 1.93	12.14	12.18
R 11.24	15.50	15.54	R 0.94	12.14	12.18
R 11.01	11.43	11.47	R 0.74	3.06	3.22
R 9.65	5.67	5.76	R 0.	9.29	9.35
R 6.32	3.48	3.62	R 6.01	HORIZON	HORIZON
R 4.20	3.21	3.36	R 7.10	16.16	16.19
R 22.58	HORIZON	HORIZON	R 7.38	11.43	11.47
R 22.58	11.43	11.47	R 6.47	5.67	5.76
R 15.10	11.43	11.47	R 4.20	3.73	3.86
R 13.59	5.67	5.76	R 16.77	HORIZON	HORIZON
R 10.56	3.73	3.86	R 16.77	11.43	11.47
R 8.06	3.17	3.32	R 11.01	11.43	11.47
R 20.08	2.50	2.69	R 9.65	5.67	5.76
R 19.20	2.37	2.57	R 7.77	3.95	4.08
R 29.20	1.73	2.00	R 4.50	3.21	3.36
R 46.24	1.25	1.60	R 15.41	2.48	2.67

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GROUND VISIBILITY PLOT - TABULAR DATA

A-7A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 42.48	2.14	2.37	R 14.54	2.37	2.57
R 34.20	5.67	5.76	R 24.20	1.73	2.00
R 31.01	11.43	11.47	R 29.20	1.25	1.60
R 29.20	15.67	19.70	R 36.92	1.99	2.23
R 25.56	HORIZON	HORIZON	R 28.63	5.67	5.76
R 35.56	HORIZON	HORIZON	R 25.10	11.43	11.47
R 38.29	17.19	17.21	R 24.20	14.23	14.26
R 39.20	11.43	11.47	R 19.75	HORIZON	HORIZON
R 40.13	8.94	9.00	R 29.20	HORIZON	HORIZON
R 41.30	10.56	10.61	R 31.92	17.19	17.21
R 42.79	10.16	10.21	R 32.95	11.43	11.47
R 45.10	5.67	5.76	R 33.74	9.79	9.84
R 48.06	2.75	2.92	R 34.65	10.56	10.61
R 48.29	2.14	2.37	R 35.79	10.56	10.61
R 50.79	1.73	2.00	R 38.51	5.67	5.76
R 59.20	1.28	1.63	R 41.30	2.75	2.92
R 76.47	1.08	1.47	R 34.20	1.73	2.00
R 99.20	1.11	1.49	R 47.83	1.43	1.74
R 124.20	1.51	1.81	R 54.20	1.19	1.55
R 130.74	2.46	2.65	R 76.47	1.07	1.47
R 130.79	2.75	2.92	R 94.20	1.13	1.51
R 133.69	5.67	5.76	R 115.45	1.45	1.76
R 137.38	11.43	11.47	R 122.83	2.35	2.56
R 139.20	17.45	17.48	R 121.92	2.75	2.92
R 144.20	HORIZON	HORIZON	R 125.66	5.67	5.76
			R 135.13	HORIZON	HORIZON
			R 125.13	0.	0.

Table 24. GROUND VISIBILITY PLOT - TABULAR DATA

A-26A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 131.56	HORIZON	HORIZON	L 140.78	40.63	40.64
L 130.97	49.81	49.82	L 125.04	59.68	59.68
L 125.04	59.68	59.68	L 120.04	HORIZON*	HORIZON*
L 120.04	HORIZON*	HORIZON*	L 117.39	HORIZON	HORIZON
L 117.39	HORIZON	HORIZON	L 93.74	HORIZON	HORIZON
L 93.46	HORIZON	HORIZON	L 99.17	HORIZON*	HORIZON*
L 99.17	HORIZON*	HORIZON*	L 100.68	42.43	42.44
L 100.60	44.75	44.77	L 80.04	37.20	37.21
L 80.04	37.20	37.21	L 70.04	27.94	27.95
L 70.04	27.14	27.16	L 65.04	16.54	16.57
L 65.04	19.40	19.43	L 63.74	14.16	14.19
L 63.14	16.54	16.57	L 62.21	11.43	11.47
L 61.25	11.43	11.47	L 60.04	4.84	4.94
L 58.46	4.76	4.86	L 51.07	4.09	4.21
L 50.63	4.22	4.34	L 49.81	3.68	3.81
L 48.98	3.65	3.78	L 50.48	3.27	3.42
L 50.04	3.10	3.26	L 57.91	2.51	2.70
L 56.69	2.50	2.69	L 59.23	2.05	2.28
L 57.90	2.03	2.26	L 62.32	1.73	2.00
L 60.59	1.73	2.00	L 65.04	1.63	1.91
L 65.04	1.58	1.67	L 70.04	1.50	1.81
L 70.04	1.50	1.80	L 80.04	1.40	1.72
L 80.04	1.40	1.72	L 86.58	1.38	1.70
L 85.04	1.39	1.71	L 96.22	1.27	1.62
L 94.43	1.27	1.61	L 96.66	1.43	1.74
L 94.43	1.43	1.74	L 100.04	1.41	1.73
L 100.04	1.43	1.74	L 109.82	1.47	1.78
L 110.04	1.47	1.78	L 137.18	1.97	2.21
L 127.77	1.76	2.02	L 135.04	1.35	1.68
L 126.25	1.35	1.68	L 126.11	0.96	1.39
L 115.81	0.96	1.39	L 105.04	0.79	1.28
L 105.04	0.86	1.32	L 90.04	0.79	1.27
L 90.04	0.79	1.27	L 70.04	0.92	1.36
L 70.04	0.82	1.29	L 54.89	1.08	1.47
L 55.04	0.94	1.38	L 44.24	1.38	1.70

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

A-26A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 37.10	1.38	1.70	L 38.23	1.99	2.23
L 32.26	2.00	2.24	L 36.05	3.73	3.86
L 28.57	5.67	5.76	L 35.26	5.67	5.76
L 28.02	11.43	11.47	L 34.67	11.43	11.47
L 27.68	15.26	15.29	L 34.31	14.86	14.89
L 27.13	HORIZON	HORIZON	L 33.79	HORIZON	HORIZON
L 20.04	HORIZON	HORIZON	L 26.14	HORIZON	HORIZON
L 20.75	14.90	14.93	L 27.03	15.68	15.71
L 21.00	11.43	11.47	L 27.25	11.43	11.47
L 22.18	5.67	5.76	L 28.43	5.67	5.76
L 25.04	2.44	2.64	L 32.25	2.00	2.24
L 26.12	1.89	2.14	L 32.25	1.82	2.08
L 23.03	2.19	2.40	L 27.91	2.14	2.37
L 23.46	2.35	2.56	L 28.35	18.29	18.31
L 20.04	2.44	2.64	L 25.04	25.01	25.03
L 15.04	3.33	3.48	L 15.04	4.09	4.21
L 2.79	6.04	6.12	L 6.07	6.17	6.25
L 5.04	6.41	6.48	L 9.01	6.31	6.39
L 5.04	11.43	11.47	L 9.23	11.43	11.47
L 5.04	12.52	12.56	L 9.16	12.94	12.97
L 2.35	15.94	15.97	L 6.36	16.54	16.57
R 2.23	14.52	14.55	L 2.43	15.94	15.97
R 5.29	13.36	13.40	R 0.84	13.52	13.56
R 9.96	HORIZON	HORIZON	R 0.99	11.43	11.47
R 11.99	HORIZON	HORIZON	R 6.70	HORIZON	HORIZON
R 12.82	15.17	15.21	R 0.84	8.47	8.53
R 5.29	11.43	11.47	R 8.44	HORIZON	HORIZON
R 5.17	8.03	8.09	R 9.74	15.68	15.71
R 9.96	9.06	9.11	R 5.39	9.51	9.57
R 16.83	10.02	10.07	R 9.96	10.07	10.12
R 17.02	11.43	11.47	R 13.79	10.20	10.25
R 17.60	13.58	13.62	R 14.15	11.43	11.47
R 19.59	HORIZON	HORIZON	R 14.59	14.74	14.78
R 26.99	HORIZON	HORIZON	R 16.39	HORIZON	HORIZON
R 26.70	106.10	106.10	R 23.05	HORIZON	HORIZON

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GROUND VISIBILITY PLOT - TABULAR DATA

A-26A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 28.14	56.17	56.17	R 22.83	98.78	98.79
R 28.44	22.19	22.21	R 24.59	59.68	59.68
R 28.58	12.33	13.37	R 24.81	22.90	22.92
R 26.80	10.78	10.82	R 23.19	11.43	11.47
R 31.87	10.33	10.38	R 26.70	10.58	10.63
R 40.84	106.10	106.10	R 29.96	14.86	14.89
R 42.38	HORIZON	HORIZON	R 36.43	HORIZON*	HORIZON*
R 44.37	HORIZON	HORIZON	R 39.59	HORIZON	HORIZON
R 36.14	12.19	12.23	R 41.26	HORIZON	HORIZON
R 36.61	11.69	11.73	R 33.22	12.94	12.97
R 34.96	10.33	10.38	R 33.73	11.74	11.78
R 39.96	8.91	8.97	R 31.70	10.20	10.25
R 44.96	6.71	6.79	R 34.96	9.51	9.57
R 47.39	5.44	5.53	R 39.56	7.70	7.76
R 57.30	3.96	4.09	R 44.53	5.44	5.53
R 57.72	4.40	4.51	R 54.53	3.96	4.09
R 60.41	5.44	5.53	R 54.45	4.31	4.43
R 63.59	5.67	5.76	R 54.96	4.51	4.62
R 63.29	11.43	11.47	R 55.96	4.43	4.54
R 63.14	13.36	13.40	R 57.96	5.03	5.13
R 62.46	HORIZON	HORIZON	R 60.40	5.37	5.46

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

Table 25. GROUND VISIBILITY PLOT - TABULAR DATA

A-26A COPILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 59.09	29.22	29.24	L 62.06	HORIZON*	HORIZON*
L 60.00	8.50	8.56	L 62.79	10.66	10.70
L 60.44	5.65	5.74	L 63.19	5.70	5.79
L 58.18	5.07	5.17	L 58.08	4.87	4.97
L 56.36	4.53	4.64	L 57.42	4.10	4.22
L 54.43	4.53	4.64	L 45.00	6.31	6.39
L 54.54	4.10	4.22	L 45.00	9.25	9.30
L 41.88	6.46	6.54	L 46.25	9.25	9.30
L 41.77	9.25	9.30	L 46.92	10.66	10.70
L 43.11	9.25	9.30	L 46.92	14.52	14.55
L 44.00	10.66	10.70	L 45.42	18.77	18.79
L 43.97	15.38	15.41	L 42.50	20.97	20.99
L 39.54	20.52	20.54	L 40.00	17.03	17.06
L 37.27	17.03	17.06	L 38.52	13.92	13.95
L 35.68	13.92	13.95	L 37.00	11.76	11.80
L 33.90	11.76	11.80	L 40.00	11.76	11.80
L 36.96	11.76	11.80	L 40.00	9.25	9.30
L 37.35	9.26	9.32	L 30.00	10.66	10.70
L 30.00	10.66	10.70	L 25.00	10.94	10.99
L 23.11	10.94	10.99	L 26.76	15.85	15.88
L 25.00	22.72	22.74	L 30.00	HORIZON*	HORIZON*
L 25.00	HORIZON*	HORIZON*	L 22.05	HORIZON*	HORIZON*
L 18.80	HORIZON*	HORIZON*	L 20.00	14.37	14.41
L 16.95	12.27	12.31	L 19.26	10.66	10.70
L 16.30	10.27	10.32	L 13.97	28.92	28.94
L 10.00	9.47	9.52	L 40.00	18.71	18.73
L 5.00	8.54	8.60	L 7.95	13.05	13.09
L 10.00	24.47	24.49	L 7.35	10.66	10.70
L 6.55	13.62	13.65	L 5.73	8.50	8.56
L 5.00	10.66	10.70	L 3.52	8.19	8.25
R 1.84	6.34	6.42	R 5.00	4.57	4.68
R 5.00	5.47	5.56	R 10.00	3.41	3.55
R 10.00	4.24	4.36	R 15.00	2.50	2.69
R 15.00	3.20	3.35	R 17.97	2.11	2.33
R 24.20	1.96	2.20	R 15.57	3.64	3.77

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

A-26A COPILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 21.55	3.64	3.77	R 13.19	10.66	10.70
R 19.28	10.66	10.70	R 12.79	13.92	13.95
R 18.75	14.98	15.01	R 11.76	HORIZON*	HORIZON*
R 17.97	HORIZON*	HORIZON*	R 17.99	HORIZON*	HORIZON*
R 25.00	HORIZON*	HORIZON*	R 18.82	14.98	15.01
R 26.19	13.92	13.95	R 21.63	43.40	43.41
R 27.35	27.94	27.95	R 25.00	41.21	41.22
R 30.00	57.29	57.30	R 30.00	5.47	5.56
R 33.33	57.29	57.30	R 36.88	2.11	2.33
R 35.00	18.77	18.79	R 48.11	1.04	1.44
R 36.10	10.66	10.70	R 50.00	0.75	1.25
R 39.49	5.47	5.56	R 21.77	13.62	13.65
R 47.64	2.11	2.33	R 21.11	10.66	10.70
R 57.38	1.20	1.56	R 21.66	5.47	5.56
R 60.86	1.14	1.52	R 27.06	1.71	1.98
R 61.30	0.76	1.25	R 45.00	0.88	1.33
R 29.34	14.05	14.09	R 43.93	0.99	1.40
R 28.40	10.66	10.70	R 31.11	2.11	2.33
R 28.33	7.10	7.17	R 24.69	5.47	5.56
R 28.76	5.47	5.56	R 23.18	10.66	10.70
R 30.00	3.64	3.77	R 65.00	0.61	1.17
R 31.95	1.96	2.20	R 100.00	0.60	1.17
R 50.00	0.99	1.40	R 130.00	0.89	1.34
R 56.05	0.88	1.33	R 145.00	1.39	1.71
R 55.60	0.99	1.40	R 132.71	1.85	2.10
R 50.00	1.16	1.53	R 110.00	1.45	1.76
R 40.00	2.11	2.33	R 93.18	1.34	1.67
R 33.18	5.47	5.56	R 93.18	1.24	1.59
R 31.17	10.66	10.70	R 85.86	1.34	1.67
R 65.00	0.71	1.22	R 70.00	1.46	1.77
R 90.00	0.57	1.15	R 60.00	1.71	1.98
R 130.00	0.72	1.23	R 55.81	2.48	2.68
R 153.18	1.36	1.69	R 51.17	2.92	3.09
R 135.00	1.91	2.15	R 48.23	3.64	3.77
R 110.00	1.45	1.76	R 51.84	4.24	4.36

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

A-26A COPILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 93.18	1.34	1.67	R 57.44	4.70	4.80
R 93.18	1.24	1.59	R 60.43	10.66	10.70
R 85.85	1.34	1.67	R 60.85	13.02	13.06
R 70.00	1.45	1.76	R 65.00	17.29	17.32
R 60.00	1.84	2.10	R 70.00	26.27	26.29
R 56.97	2.50	2.69	R 80.00	30.30	30.32
R 51.42	3.05	3.21	R 90.00	30.30	30.32
R 49.49	3.64	3.77	R 100.00	30.30	30.32
R 51.92	4.24	4.36	R 97.97	HORIZON*	HORIZON*
R 59.09	4.74	4.85	R 93.97	HORIZON	HORIZON
R 62.00	10.66	10.70	R 118.66	HORIZON*	HORIZON*
R 62.71	12.82	12.86	R 125.00	40.63	40.64
R 65.00	18.77	18.79	R 145.00	35.58	35.59
R 70.00	26.64	26.65	R 150.00	23.18	23.20
R 80.00	30.30	30.32	R 155.00	10.66	10.70
R 90.00	34.93	34.94	R 156.52	10.14	10.19
R 100.00	33.69	33.71	R 156.92	13.21	13.24
R 97.91	HORIZON*	HORIZON*	R 157.55	HORIZON*	HORIZON*
R 93.97	HORIZON	HORIZON			
R 118.66	HORIZON*	HORIZON*			
R 125.00	43.40	43.41			
R 145.00	35.58	35.59			
R 150.00	24.16	24.18			
R 155.00	10.66	10.70			
R 160.00	9.25	9.30			
R 162.66	13.62	13.65			
R 163.55	HORIZON*	HORIZON*			

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

Table 26. GROUND VISIBILITY PLOT - TABULAR DATA

C-123 COPILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 68.30	HORIZON	HORIZON	L 70.70	HORIZON	HORIZON
L 67.43	14.19	14.23	L 69.61	13.95	13.99
L 67.00	11.43	11.47	L 69.39	11.43	11.47
L 66.36	7.30	7.37	L 68.45	7.30	7.37
L 60.70	6.17	6.25	L 63.30	6.17	6.25
L 58.52	6.77	6.84	L 60.91	6.94	7.01
L 57.87	8.64	8.70	L 60.19	8.47	8.53
L 58.45	11.43	11.47	L 60.70	11.43	11.47
L 58.96	13.95	13.99	L 61.42	14.19	14.23
L 60.70	HORIZON	HORIZON	L 63.52	HORIZON	HORIZON
L 31.78	HORIZON	HORIZON	L 36.00	HORIZON	HORIZON
L 32.14	42.75	42.76	L 36.38	40.63	40.64
L 33.45	26.27	26.29	L 37.97	27.14	27.16
L 33.60	17.89	17.91	L 37.97	18.64	18.67
L 37.97	18.64	18.67	L 42.27	19.88	19.90
L 37.82	HORIZON	HORIZON	L 42.19	HORIZON	HORIZON
L 57.87	HORIZON	HORIZON	L 60.70	HORIZON	HORIZON
L 56.35	14.41	14.44	L 58.93	14.19	14.23
L 55.70	11.43	11.47	L 58.34	11.43	11.47
L 53.56	5.96	6.04	L 57.70	8.83	8.89
L 45.78	5.03	5.13	L 55.98	5.87	5.96
L 45.70	5.67	5.76	L 49.55	4.91	5.01
L 44.55	5.91	6.00	L 49.34	5.71	5.80
L 44.26	4.96	5.06	L 47.98	5.91	6.00
L 36.75	4.59	4.70	L 28.05	7.30	7.37
L 25.12	7.43	7.50	L 39.48	4.59	4.70
L 30.91	6.22	6.30	L 33.60	6.22	6.30
L 39.48	4.59	4.70	L 41.39	4.73	4.83
L 22.98	4.13	4.25	L 25.70	4.22	4.34
L 25.70	11.43	11.47	L 29.23	11.43	11.47
L 26.36	14.19	14.23	L 29.52	14.19	14.23
L 27.68	HORIZON	HORIZON	L 30.70	HORIZON	HORIZON
L 23.09	14.90	14.93	L 27.68	HORIZON	HORIZON
L 23.98	HORIZON	HORIZON	L 26.28	14.41	14.44
L 22.70	11.43	11.47	L 25.70	11.43	11.47

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GROUND VISIBILITY PLOT - TABULAR DATA

C-123 COPILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 19.89	4.02	4.15	L 23.05	4.16	4.28
L 4.89	3.27	3.42	L 23.91	6.17	6.25
L 20.90	6.51	6.59	L 10.26	3.38	3.52
L 13.74	5.09	5.19	L 16.72	5.13	5.22
L 0.50	3.19	3.34	L 4.96	3.30	3.45
R 17.08	2.95	3.12	R 10.84	HORIZON	HORIZON
R 16.23	11.43	11.47	R 11.21	14.86	14.89
R 16.16	14.41	14.44	R 11.29	11.43	11.47
R 16.01	HORIZON	HORIZON	R 12.98	2.93	3.09
R 22.39	HORIZON	HORIZON	R 17.16	HORIZON	HORIZON
R 22.39	42.75	42.76	R 17.17	32.00	32.01
R 25.76	16.54	16.57	R 19.85	16.88	16.91
R 22.39	14.41	14.44	R 17.51	14.41	14.44
R 22.39	11.43	11.47	R 17.44	11.43	11.47
R 22.39	5.09	5.19	R 17.91	5.08	5.17
R 24.61	5.17	5.26	R 19.74	5.16	5.25
R 22.39	4.13	4.25	R 18.16	4.13	4.25
R 25.00	3.23	3.38	R 20.40	3.27	3.42
R 29.30	2.85	3.02	R 24.30	2.86	3.03
R 36.91	2.83	3.01	R 31.62	2.82	2.99
R 38.43	3.01	3.17	R 33.21	3.00	3.16
R 37.63	11.43	11.47	R 31.69	11.43	11.47
R 37.63	14.52	14.55	R 31.47	14.41	14.44
R 37.10	HORIZON	HORIZON	R 31.04	HORIZON	HORIZON
R 25.41	2.46	2.66	R 21.51	2.44	2.64
R 31.62	1.80	2.06	R 27.84	1.78	2.04
R 38.36	1.68	1.96	R 34.30	1.69	1.96
R 38.07	2.19	2.40	R 33.65	2.16	2.38
R 36.62	2.35	2.56	R 32.05	2.35	2.55
R 45.40	HORIZON	HORIZON	R 38.87	HORIZON	HORIZON
R 45.18	15.38	15.41	R 39.30	14.86	14.89
R 45.10	11.43	11.47	R 39.30	11.43	11.47
R 44.30	1.60	1.89	R 39.95	1.59	1.88
R 80.17	1.44	1.75	R 74.95	1.41	1.73
R 88.87	2.75	2.92	R 83.65	2.75	2.92

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GROUND VISIBILITY PLOT - TABULAR DATA

C-123 COPILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 95.82	11.43	11.47	R 89.74	11.43	11.47
R 96.33	13.52	13.56	R 90.18	14.86	14.89
R 97.56	45.83	45.84	R 91.07	49.81	49.82
R 96.91	HORIZON	HORIZON	R 90.62	HORIZON	HORIZON
R 105.92	HORIZON	HORIZON	R 99.73	HORIZON	HORIZON
R 104.60	14.86	14.89	R 97.83	14.86	14.89
R 104.30	11.43	11.47	R 97.16	11.43	11.47
R 99.89	2.75	2.92	R 93.17	2.75	2.92
R 95.60	1.63	1.91	R 89.73	1.59	1.88
R 117.12	2.21	2.42	R 113.01	2.14	2.37
R 125.47	5.67	5.76	R 122.20	5.67	5.76
R 126.80	10.58	10.63	R 123.79	11.43	11.47
R 123.06	19.88	19.90	R 123.07	19.88	19.90
R 122.56	40.63	40.64	R 122.63	42.43	42.44
R 114.30	40.63	40.64	R 114.30	37.20	37.21
R 110.38	55.62	55.63	R 110.44	55.62	55.63
R 109.30	HORIZON	HORIZON	R 109.30	HORIZON	HORIZON
R 102.67	9.51	9.57			
R 95.17	2.75	2.92			
R 96.47	2.75	2.92			
R 86.87	1.54	1.84			
R 94.30	1.61	1.90			

Table 27. GROUND VISIBILITY PLOT - TABULAR DATA
F-5A, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 124.10	3.08	3.24	L 142.89	HORIZON	HORIZON
L 120.60	3.25	3.40	L 141.64	16.68	16.71
L 116.65	2.68	2.86	L 141.23	11.43	11.47
L 137.18	HORIZON	HORIZON	L 140.32	6.94	7.01
L 136.07	18.34	18.37	L 134.11	5.67	5.76
L 135.52	11.43	11.47	L 128.10	5.14	5.24
L 134.11	5.67	5.76	L 123.10	4.55	4.66
L 128.10	5.14	5.24	L 117.22	3.57	3.71
L 123.10	4.55	4.66	L 123.10	3.41	3.55
L 120.52	4.91	5.01	L 128.10	3.63	3.77
L 118.10	4.63	4.73	L 124.62	2.66	2.84
L 115.01	3.73	3.86	L 108.10	2.14	2.37
L 110.70	2.46	2.65	L 93.10	1.96	2.20
L 93.10	2.06	2.29	L 78.10	1.93	2.18
L 78.10	1.93	2.18	L 58.10	2.14	2.37
L 58.10	2.05	2.28	L 45.06	2.50	2.69
L 41.52	2.42	2.62	L 41.14	3.48	3.62
L 34.12	5.67	5.76	L 39.40	5.67	5.76
L 31.18	11.43	11.47	L 36.93	11.43	11.47
L 30.45	16.16	16.19	L 35.97	16.49	16.52
L 28.68	HORIZON	HORIZON	L 33.32	HORIZON	HORIZON
L 18.10	HORIZON	HORIZON	L 21.15	HORIZON	HORIZON
L 19.43	26.27	26.29	L 20.32	104.17	104.17
L 21.50	15.85	15.88	L 21.30	25.01	25.03
L 22.54	11.43	11.47	L 24.13	25.01	25.03
L 25.54	5.67	5.76	L 25.31	37.44	37.45
L 28.10	3.45	3.59	L 26.93	16.49	16.52
L 26.76	2.85	3.02	L 27.95	11.43	11.47
L 23.10	3.54	3.68	L 30.89	5.67	5.76
L 18.10	3.98	4.10	L 32.81	3.73	3.86
L 13.10	4.44	4.55	L 30.53	2.95	3.11
L 2.23	5.67	5.76	L 27.55	3.50	3.64
L 3.87	5.03	5.13	L 23.10	3.95	4.08
L 0.28	5.01	5.11	L 18.10	4.48	4.59
L 1.90	6.34	6.42	L 13.10	4.65	4.76

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GROUND VISIBILITY PLOT - TABULAR DATA

F-5A, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 1.75	8.39	8.44	L 8.10	4.70	4.81
L 1.09	8.39	8.44	L 5.75	5.05	5.15
L 2.71	11.43	11.47	L 7.22	6.34	6.42
L 2.56	16.16	16.19	L 7.07	8.39	8.44
L 1.91	17.19	17.21	L 6.41	8.39	8.44
L 1.40	17.89	17.91	L 8.03	11.43	11.47
L 2.56	HORIZON	HORIZON	L 7.88	16.16	16.19
L 1.84	HORIZON	HORIZON	L 7.23	17.19	17.21
R 8.12	HORIZON	HORIZON	L 6.72	17.89	17.91
R 7.45	HORIZON	HORIZON	L 7.88	HORIZON	HORIZON
R 8.12	19.08	19.11	L 7.16	HORIZON	HORIZON
R 7.45	19.08	19.11	R 2.76	HORIZON	HORIZON
R 8.12	11.43	11.47	R 2.09	HORIZON	HORIZON
R 7.45	11.43	11.47	R 2.76	19.08	19.11
R 8.12	5.67	5.76	R 2.09	19.08	19.11
R 6.39	5.67	5.76	R 3.85	11.43	11.47
R 6.20	5.01	5.11	R 2.09	11.43	11.47
R 8.44	4.82	4.92	R 3.85	5.67	5.76
R 11.90	4.74	4.84	R 1.03	5.67	5.76
R 18.75	4.44	4.55	R 0.47	5.05	5.15
R 23.82	4.18	4.30	R 4.04	5.05	5.15
R 28.42	3.42	3.57	R 11.50	4.55	4.66
R 30.52	2.96	3.13	R 16.90	4.20	4.31
R 33.85	2.84	3.01	R 21.90	3.73	3.86
R 30.95	5.67	5.76	R 24.54	3.02	3.18
R 28.20	11.43	11.47	R 28.64	2.78	2.95
R 27.33	14.74	14.78	R 25.87	5.67	5.76
R 24.43	HORIZON	HORIZON	R 23.12	11.43	11.47
R 20.20	HORIZON	HORIZON	R 22.22	16.83	16.86
R 19.75	18.77	18.79	R 18.53	HORIZON	HORIZON
R 14.25	18.95	18.98	R 13.15	HORIZON	HORIZON
R 13.47	HORIZON	HORIZON	R 14.12	19.60	19.63
R 34.29	HORIZON	HORIZON	R 8.50	18.29	18.31
R 36.68	17.19	17.21	R 8.20	HORIZON	HORIZON
R 37.47	11.43	11.47	R 27.63	HORIZON	HORIZON

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GROUND VISIBILITY PLOT - TABULAR DATA

F-5A, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 39.79	5.67	5.76	R 30.16	16.16	16.19
R 40.95	3.73	3.86	R 31.10	11.43	11.47
R 40.05	3.26	3.41	R 33.33	5.67	5.76
R 40.59	2.75	2.92	R 34.61	3.73	3.86
R 56.90	2.22	2.44	R 34.04	3.37	3.51
R 71.90	2.05	2.28	R 35.04	2.75	2.92
R 91.90	2.00	2.24	R 56.90	2.12	2.35
R 116.90	2.45	2.64	R 71.90	1.98	2.22
R 138.36	3.73	3.86	R 91.90	2.09	2.32
R 135.74	4.59	4.69	R 116.90	2.75	2.92
R 131.90	4.12	4.24	R 132.97	3.73	3.86
R 126.90	3.61	3.75	R 133.63	4.20	4.31
R 121.90	3.50	3.64	R 131.90	4.12	4.24
R 120.11	3.71	3.84	R 126.90	3.61	3.75
R 121.90	4.59	4.69	R 121.90	3.50	3.64
R 126.90	5.20	5.29	R 120.11	3.71	3.84
R 131.90	5.67	5.76	R 121.90	4.59	4.69
R 136.90	6.48	6.56	R 126.90	5.20	5.29
R 140.32	7.25	7.32	R 131.90	5.67	5.76
R 141.31	11.43	11.47	R 134.43	5.76	5.84
R 141.75	17.19	17.21	R 135.37	11.43	11.47
R 142.86	HORIZON	HORIZON	R 135.77	15.42	15.45
			R 136.90	HORIZON	HORIZON
			R 136.90	0.	0.

Table 28. GROUND VISIBILITY PLOT - TABULAR DATA

F-5B FRONT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 137.44	HORIZON	HORIZON	L 149.40	HORIZON	HORIZON
L 136.43	22.63	22.65	L 137.93	11.43	11.47
L 132.00	11.43	11.47	L 109.40	3.37	3.51
L 109.40	4.05	4.17	L 84.40	2.49	2.68
L 84.40	2.66	2.84	L 64.40	2.39	2.59
L 64.40	2.39	2.59	L 47.63	2.55	2.74
L 41.38	2.57	2.76	L 43.49	5.67	5.76
L 37.62	5.67	5.76	L 41.98	10.02	10.07
L 35.58	10.18	10.23	L 42.35	11.43	11.47
L 36.38	14.86	14.89	L 42.73	14.44	14.48
L 35.39	HORIZON	HORIZON	L 41.67	HORIZON	HORIZON
L 24.40	HORIZON	HORIZON	L 30.06	HORIZON	HORIZON
L 27.73	16.63	16.66	L 32.05	16.49	16.52
L 28.51	11.43	11.47	L 33.96	11.43	11.47
L 31.35	5.67	5.76	L 36.75	5.67	5.76
L 34.40	3.02	3.18	L 39.63	2.97	3.14
L 33.74	2.64	2.83	L 39.40	2.67	2.85
L 24.40	2.95	3.11	L 29.40	2.93	3.09
L 22.04	3.73	3.86	L 27.34	3.73	3.86
L 19.40	4.83	4.93	L 24.40	4.96	5.06
L 14.40	6.01	6.09	L 19.40	6.01	6.09
L 4.13	6.01	6.09	L 14.40	6.01	6.09
L 9.40	6.01	6.09	L 9.40	6.01	6.09
L 2.16	5.45	5.54	L 7.43	5.45	5.54
L 1.86	6.06	6.14	L 7.13	6.06	6.14
L 0.	5.32	5.41	L 5.08	5.32	5.41
L 0.49	6.06	6.14	L 5.76	6.06	6.14
L 1.25	7.32	7.39	L 6.52	7.32	7.39
L 1.18	9.56	9.61	L 6.45	9.56	9.61
L 0.49	9.56	9.61	L 5.76	9.56	9.61
L 1.86	11.43	11.47	L 7.13	11.43	11.47
L 0.49	14.30	14.33	L 5.76	14.30	14.33
L 1.71	22.90	22.92	L 6.45	22.90	22.92
L 0.49	22.90	22.92	L 5.76	22.90	22.92
L 1.71	HORIZON	HORIZON	L 6.98	HORIZON	HORIZON

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GROUND VISIBILITY PLOT - TABULAR DATA

F-5B FRONT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 1.18	HORIZON	HORIZON	L 6.45	HORIZON	HORIZON
R 7.60	HORIZON	HORIZON	R 2.12	HORIZON	HORIZON
R 7.60	19.27	19.30	R 1.32	19.27	19.30
R 6.78	19.27	19.30	R 2.12	19.27	19.30
R 7.93	11.43	11.47	R 1.47	11.43	11.47
R 6.63	11.43	11.47	R 2.56	11.43	11.47
R 7.71	5.92	6.00	R 1.47	5.92	6.00
R 6.34	5.92	6.00	R 2.48	5.92	6.00
R 5.60	5.24	5.34	R 0.38	5.24	5.34
R 10.60	6.01	6.09	R 10.60	6.01	6.09
R 15.60	6.01	6.09	R 15.60	6.01	6.09
R 20.60	6.28	6.36	R 20.60	4.76	4.86
R 25.60	4.82	4.92	R 25.60	3.02	3.18
R 30.60	2.99	3.16	R 35.17	2.69	2.87
R 40.60	2.68	2.86	R 33.93	3.73	3.86
R 37.07	5.67	5.76	R 31.69	5.67	5.76
R 34.34	11.43	11.47	R 28.91	11.43	11.47
R 30.60	HORIZON	HORIZON	R 27.81	15.85	15.88
R 41.92	HORIZON	HORIZON	R 25.60	HORIZON	HORIZON
R 42.58	21.20	21.23	R 35.38	HORIZON	HORIZON
R 42.36	14.59	14.63	R 36.05	16.93	16.96
R 42.14	11.43	11.47	R 35.90	11.43	11.47
R 44.71	5.67	5.76	R 38.33	5.67	5.76
R 48.57	2.75	2.92	R 40.78	2.70	2.88
R 65.60	2.48	2.68	R 65.60	2.48	2.67
R 85.60	2.59	2.78	R 85.60	2.78	2.95
R 110.60	3.56	3.70	R 110.60	4.22	4.34
R 130.60	6.35	6.43	R 132.13	11.43	11.47
R 140.60	13.78	13.82	R 135.60	16.16	16.19
R 142.63	18.40	18.43	R 140.38	HORIZON	HORIZON
R 146.46	HORIZON	HORIZON			

Table 29. GROUND VISIBILITY PLOT - TABULAR DATA

F-5B REAR, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 139.24	HORIZON	HORIZON	L 140.88	4.60	4.71
L 137.71	16.73	16.76	L 138.57	4.96	5.06
L 137.17	11.43	11.47	L 140.00	5.10	5.19
L 135.00	5.67	5.76	L 145.58	HORIZON	HORIZON
L 125.00	4.63	4.73	L 144.11	16.73	16.76
L 113.30	3.41	3.55	L 143.55	11.43	11.47
L 125.00	3.29	3.43	L 140.00	6.18	6.26
L 133.00	4.04	4.16	L 125.00	4.63	4.73
L 134.11	3.73	3.86	L 114.19	3.33	3.47
L 132.77	2.69	2.87	L 125.00	3.29	3.43
L 110.00	1.95	2.19	L 133.48	4.13	4.25
L 95.00	1.73	2.00	L 138.96	2.75	2.92
L 75.00	1.70	1.97	L 110.00	1.79	2.05
L 55.00	1.91	2.15	L 55.00	1.64	1.92
L 32.06	2.67	2.85	L 75.00	1.73	2.00
L 32.17	3.73	3.86	L 55.00	2.04	2.27
L 31.41	5.67	5.76	L 36.74	2.67	2.85
L 30.87	11.43	11.47	L 36.55	3.73	3.86
L 30.00	19.21	19.23	L 36.30	5.67	5.76
L 28.77	HORIZON	HORIZON	L 35.54	11.43	11.47
L 20.59	HORIZON	HORIZON	L 34.71	19.21	19.23
L 21.55	17.72	17.75	L 33.85	HORIZON	HORIZON
L 20.77	11.43	11.47	L 25.00	HORIZON	HORIZON
L 20.00	5.67	5.76	L 26.10	15.59	15.62
L 17.77	4.66	4.77	L 24.70	10.80	10.85
L 12.86	6.27	6.35	L 23.82	10.72	10.76
L 13.23	11.43	11.47	L 23.75	5.34	5.44
L 13.09	17.29	17.32	L 22.50	4.66	4.77
L 12.00	HORIZON	HORIZON	L 16.21	6.44	6.52
L 3.53	HORIZON	HORIZON	L 17.09	11.43	11.47
L 3.09	56.17	56.17	L 16.76	17.89	17.91
L 10.00	8.05	8.11	L 15.55	HORIZON	HORIZON
L 7.99	8.84	8.90	L 6.52	HORIZON	HORIZON
L 6.39	HORIZON	HORIZON	L 15.00	7.91	7.98
L 2.86	21.69	21.71	L 10.00	9.48	9.53

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GROUND VISIBILITY PLOT - TABULAR DATA

F-5B REAR, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 0.	27.01	27.03	L 10.00	HORIZON	HORIZON
R 0.	27.01	27.03	L 9.24	14.02	14.05
R 3.18	28.92	28.94	L 8.80	11.43	11.47
R 5.00	21.69	21.71	L 7.50	12.56	12.60
R 8.20	14.02	14.05	L 6.01	16.73	16.76
R 9.30	11.43	11.47	L 2.82	26.03	26.05
R 9.71	15.59	15.62	L 0.	27.01	27.03
R 10.59	HORIZON	HORIZON	R 0.	27.01	27.03
R 13.25	9.13	9.18	R 3.09	22.63	22.65
R 18.55	6.50	6.57	R 6.10	13.42	13.46
R 18.85	8.05	8.11	R 6.32	17.89	17.91
R 20.00	9.56	9.61	R 6.65	HORIZON	HORIZON
R 21.33	9.29	9.35	R 8.31	9.29	9.35
R 22.66	7.82	7.88	R 15.44	5.79	5.88
R 24.15	6.66	6.73	R 15.00	6.95	7.02
R 26.30	5.67	5.76	R 15.22	7.89	7.96
R 26.09	3.98	4.10	R 16.11	9.34	9.39
R 26.30	11.43	11.47	R 17.55	9.13	9.18
R 26.63	20.52	20.54	R 20.00	6.91	6.98
R 25.98	HORIZON	HORIZON	R 20.74	6.01	6.10
R 34.45	HORIZON	HORIZON	R 18.44	4.79	4.89
R 35.88	15.26	15.29	R 21.33	9.13	9.18
R 36.10	11.43	11.47	R 21.66	20.82	20.84
R 37.06	5.67	5.76	R 20.77	HORIZON	HORIZON
R 37.79	3.73	3.86	R 29.46	HORIZON	HORIZON
R 37.76	2.75	2.92	R 31.19	11.43	11.47
R 65.00	1.98	2.22	R 32.39	5.67	5.76
R 95.00	1.79	2.05	R 32.75	3.73	3.86
R 120.00	2.14	2.37	R 32.82	2.75	2.92
R 138.77	2.91	3.08	R 65.00	1.85	2.11
R 132.98	4.37	4.48	R 95.00	1.85	2.11
R 130.00	3.89	4.02	R 120.00	2.38	2.58
R 120.00	3.37	3.51	R 132.23	2.87	3.04
R 113.09	3.51	3.65	R 132.98	4.37	4.48
R 120.00	4.47	4.58	R 130.00	3.89	4.02

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GROUND VISIBILITY PLOT - TABULAR DATA

F-5B REAR, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 130.00	5.39	5.49	R 120.00	3.37	3.51
R 135.00	5.89	5.98	R 113.09	3.51	3.65
R 138.80	6.58	6.66	R 120.00	4.47	4.58
R 141.28	6.90	6.97	R 130.00	5.39	5.49
R 142.71	11.43	11.47	R 135.00	5.89	5.98
R 143.00	14.98	15.01	R 136.06	11.43	11.47
R 145.00	HORIZON	HORIZON	R 137.08	15.72	15.75
R 141.05	5.67	5.76	R 138.61	HORIZON	HORIZON
R 144.28	4.87	4.97			
R 138.33	5.14	5.24			

Table 30. GROUND VISIBILITY PLOT - TABULAR DATA

F-105D, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 137.20	HORIZON	HORIZON	L 146.50	HORIZON	HORIZON
L 135.22	16.49	16.52	L 145.24	16.16	16.19
L 134.56	11.43	11.47	L 144.67	11.43	11.47
L 131.67	2.57	2.76	L 142.27	5.67	5.76
L 128.89	2.57	2.76	L 136.56	2.35	2.56
L 128.89	2.33	2.54	L 129.56	2.12	2.35
L 127.42	2.14	2.37	L 124.56	1.95	2.19
L 124.56	2.06	2.29	L 122.28	1.80	2.06
L 119.56	1.87	2.12	L 122.67	1.64	1.92
L 117.28	1.73	2.00	L 128.09	1.46	1.77
L 117.28	1.58	1.87	L 99.67	1.11	1.49
L 120.35	1.46	1.77	L 79.67	1.11	1.49
L 118.56	1.43	1.74	L 54.67	1.39	1.71
L 116.37	1.47	1.78	L 42.56	1.73	2.00
L 114.56	1.34	1.67	L 38.30	2.75	2.92
L 99.67	1.19	1.55	L 34.67	5.67	5.76
L 79.67	1.11	1.49	L 32.33	11.43	11.47
L 54.67	1.27	1.62	L 31.71	15.55	15.58
L 36.71	1.73	2.00	L 29.30	HORIZON	HORIZON
L 32.33	2.75	2.92	L 13.56	55.08	55.09
L 29.67	5.67	5.76	L 16.54	HORIZON	HORIZON
L 27.39	11.43	11.47	L 20.15	14.86	14.89
L 26.71	15.05	15.09	L 21.03	11.43	11.47
L 24.33	HORIZON	HORIZON	L 25.33	6.20	6.28
L 9.56	59.06	59.07	L 27.24	6.83	6.90
L 11.72	HORIZON	HORIZON	L 28.22	5.67	5.76
L 14.67	15.26	15.29	L 29.67	3.73	3.86
L 15.85	11.43	11.47	L 30.88	2.25	2.47
L 20.55	6.35	6.43	L 28.07	2.14	2.37
L 22.70	7.59	7.66	L 26.33	2.27	2.48
L 23.44	5.67	5.76	L 21.48	2.75	2.92
L 25.25	3.73	3.86	L 13.19	3.68	3.82
L 26.33	2.27	2.48	L 7.62	3.73	3.86
L 23.15	2.14	2.37	L 7.46	5.67	5.76
L 17.01	2.75	2.92	L 9.21	11.43	11.47

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GROUND VISIBILITY PLOT - TABULAR DATA

F-105D, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 9.89	3.73	3.86	L 9.67	14.41	14.44
L 7.62	3.77	3.90	L 10.99	HORIZON	HORIZON
L 4.22	4.09	4.21	L 0.	4.40	4.51
L 6.26	11.43	11.47	L 1.00	4.40	4.51
L 6.48	14.48	14.52	L 1.00	6.20	6.28
L 7.67	HORIZON*	HORIZON*	L 2.33	6.20	6.28
L 8.00	HORIZON	HORIZON	L 2.33	4.40	4.51
L 0.	4.39	4.50	L 3.02	4.40	4.51
L 1.87	4.39	4.50	L 5.57	11.43	11.47
L 2.42	7.07	7.14	L 5.32	14.63	14.66
L 2.97	11.43	11.47	L 7.15	HORIZON	HORIZON
L 3.05	15.30	15.33	L 5.12	9.13	9.18
L 3.76	HORIZON	HORIZON	L 2.75	10.35	10.39
L 2.70	6.13	6.21	L 0.	10.35	10.39
L 2.20	9.13	9.18	R 0.	10.35	10.39
L 0.	10.35	10.39	R 2.46	9.13	9.18
R 0.	10.35	10.39	R 2.99	6.13	6.21
R 3.33	10.35	10.39	R 3.80	HORIZON	HORIZON
R 5.44	9.13	9.18	R 3.41	14.86	14.89
R 5.44	7.54	7.61	R 2.78	7.01	7.08
R 6.37	HORIZON	HORIZON	R 2.28	4.39	4.50
R 6.02	14.98	15.01	R 0.	4.39	4.50
R 5.68	11.43	11.47	R 7.91	HORIZON	HORIZON
R 4.09	4.40	4.51	R 7.79	15.72	15.75
R 2.28	4.40	4.51	R 6.73	11.43	11.47
R 2.28	6.20	6.28	R 4.89	4.13	4.25
R 1.05	6.20	6.28	R 7.88	4.13	4.25
R 1.05	4.40	4.51	R 8.23	3.73	3.86
R 0.	4.40	4.51	R 10.44	3.50	3.64
R 11.44	HORIZON	HORIZON	R 16.73	2.75	2.92
R 10.33	15.38	15.41	R 19.54	2.29	2.50
R 9.98	11.43	11.47	R 23.15	2.20	2.42
R 8.00	5.67	5.76	R 23.63	2.75	2.92
R 7.62	4.66	4.76	R 23.97	3.16	3.31
R 7.88	4.13	4.25	R 23.63	3.73	3.86

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

F-105D, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 11.23	4.13	4.25	R 22.80	4.51	4.62
R 11.77	3.73	3.86	R 21.90	5.67	5.76
R 13.44	3.67	3.80	R 20.88	7.01	7.08
R 21.63	2.75	2.92	R 17.71	11.43	11.47
R 23.88	2.25	2.47	R 16.50	16.16	16.19
R 27.17	2.25	2.46	R 13.61	HORIZON	HORIZON
R 28.37	2.52	2.72	R 12.66	HORIZON	HORIZON
R 28.52	3.35	3.49	R 23.57	HORIZON	HORIZON
R 28.44	3.73	3.86	R 26.17	14.34	14.37
R 25.44	7.20	7.27	R 26.92	11.43	11.47
R 22.50	11.43	11.47	R 29.02	5.67	5.76
R 21.30	15.26	15.29	R 30.63	3.73	3.86
R 18.12	HORIZON	HORIZON	R 31.84	2.75	2.92
R 17.06	HORIZON	HORIZON	R 33.51	2.14	2.37
R 28.80	HORIZON	HORIZON	R 36.21	1.73	2.00
R 31.08	16.16	16.19	R 50.33	1.28	1.63
R 31.80	11.43	11.47	R 65.44	1.08	1.47
R 24.42	5.67	5.76	R 89.63	1.00	1.41
R 36.19	3.73	3.86	R 112.60	1.19	1.55
R 38.56	2.14	2.37	R 120.44	1.34	1.67
R 42.37	1.73	2.00	R 125.44	3.73	3.86
R 50.33	1.48	1.78	R 129.46	11.43	11.47
R 65.33	1.19	1.55	R 130.44	15.85	15.88
R 90.33	1.06	1.46	R 134.20	HORIZON	HORIZON
R 125.33	1.26	1.61	R 122.88	1.38	1.71
R 133.08	1.43	1.74	R 126.61	3.73	3.86
R 136.46	1.55	1.85	R 131.40	11.43	11.47
R 136.46	1.58	1.87	R 132.39	14.98	15.01
R 130.44	1.57	1.86	R 135.44	30.63	30.64
R 126.32	1.64	1.92	R 138.62	21.60	21.63
R 125.21	1.73	2.00	R 136.92	17.94	17.97
R 125.21	1.79	2.05	R 136.37	7.49	7.56
R 126.09	1.90	2.15	R 138.62	6.83	6.90
R 128.70	2.02	2.25	R 139.00	3.73	3.86
R 136.32	2.27	2.48	R 139.41	2.59	2.78

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GROUND VISIBILITY PLOT - TABULAR DATA

F-105C, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 137.25	3.13	3.29	R 133.48	2.30	2.51
R 139.22	5.67	5.76	R 128.52	2.10	2.32
R 141.22	11.43	11.47	R 123.99	1.93	2.17
R 141.99	16.30	16.33	R 123.50	1.65	1.93
R 145.44	HORIZON	HORIZON	R 125.88	1.60	1.89

Table 31. GROUND VISIBILITY PLOT - TABULAR DATA

F-111A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 125.65	HORIZON	HORIZON	L 136.56	HORIZON	HORIZON
L 125.65	15.85	15.88	L 134.72	15.26	15.29
L 125.65	11.43	11.47	L 134.14	11.43	11.47
L 122.87	5.67	5.76	L 122.92	2.41	2.61
L 112.68	2.31	2.52	L 90.65	1.56	1.85
L 90.65	1.67	1.95	L 70.65	1.51	1.81
L 70.65	1.51	1.81	L 53.65	1.61	1.90
L 45.65	1.64	1.92	L 51.20	1.73	2.00
L 43.19	1.73	2.00	L 38.53	5.67	5.76
L 29.84	5.67	5.76	L 34.97	11.43	11.47
L 26.64	11.43	11.47	L 34.59	15.26	15.29
L 25.65	15.72	15.75	L 31.67	HORIZON	HORIZON
L 23.00	HORIZON	HORIZON	L 12.43	HORIZON	HORIZON
L 3.78	HORIZON	HORIZON	L 16.68	15.26	15.29
L 7.63	16.49	16.52	L 17.97	11.43	11.47
L 9.22	11.43	11.47	L 22.52	5.67	5.76
L 14.50	5.67	5.76	L 37.81	1.58	1.87
L 30.06	1.73	2.00	L 28.85	1.81	2.07
L 15.65	2.26	2.47	L 16.68	2.99	3.16
L 10.95	2.78	2.95	L 16.64	3.73	3.86
L 11.09	3.73	3.86	L 9.25	3.99	4.12
L 9.49	3.73	3.86	L 15.65	3.73	3.86
L 9.52	2.99	3.16	L 0.65	4.04	4.16
L 5.88	3.84	3.96	L 14.90	3.53	3.67
L 3.30	3.99	4.12	L 7.20	3.88	4.01
L 2.62	4.42	4.53	L 12.30	3.84	3.96
L 3.58	6.29	6.37	L 9.22	5.67	5.76
L 2.67	7.19	7.26	L 7.74	5.67	5.76
L 0.	8.55	8.61	L 8.21	7.19	7.26
R 0.	8.55	8.61	L 5.65	8.55	8.61
R 5.35	8.55	8.61	L 0.	8.55	8.61
R 8.05	7.01	7.08	R 0.	8.55	8.61
R 8.79	6.19	6.27	R 2.82	7.07	7.14
R 9.23	5.06	5.16	R 3.58	6.42	6.50
R 7.90	4.88	4.98	R 3.69	4.80	4.90

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GROUND VISIBILITY PLOT - TABULAR DATA

F-111A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 2.29	4.60	4.71	R 2.25	4.76	4.86
R 0.67	4.42	4.53	R 7.02	4.72	4.83
R 14.35	11.43	11.47	R 11.31	11.43	11.47
R 15.05	14.44	14.48	R 12.10	15.26	15.29
R 17.86	HORIZON	HORIZON	R 13.84	HORIZON	HORIZON
R 25.68	HORIZON	HORIZON	R 21.44	HORIZON	HORIZON
R 28.57	45.83	45.84	R 24.35	42.43	42.44
R 28.20	8.93	8.98	R 24.20	8.83	8.89
R 22.58	9.45	9.50	R 19.35	9.13	9.18
R 21.45	12.48	12.52	R 17.63	10.82	10.87
R 14.35	5.15	5.25	R 12.61	5.08	5.17
R 32.53	5.38	5.48	R 27.79	5.16	5.25
R 54.01	7.29	7.36	R 50.24	7.32	7.39
R 60.45	7.89	7.96	R 56.28	7.93	7.99
R 65.71	3.34	3.49	R 62.44	3.10	3.26
R 63.10	5.67	5.75	R 59.57	5.67	5.76
R 60.53	11.43	11.47	R 56.62	11.43	11.47
R 59.94	15.26	15.29	R 55.71	14.44	14.48
R 56.93	HORIZON	HORIZON	R 52.68	HORIZON	HORIZON

Table 32. GROUND VISIBILITY PLOT - TABULAR DATA

C-1A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 155.91	65.51	85.52	L 158.72	89.52	86.53
L 157.18	17.19	17.21	L 160.25	17.56	17.58
L 157.18	11.43	11.47	L 160.31	11.43	11.47
L 158.12	5.67	5.76	L 161.14	5.67	5.76
L 158.27	3.10	3.26	L 161.90	3.46	3.60
L 151.93	2.14	2.37	L 159.63	2.75	2.92
L 144.63	1.64	1.92	L 149.63	1.67	1.95
L 142.51	5.67	5.76	L 147.71	5.67	5.76
L 142.13	11.43	11.47	L 147.23	11.43	11.47
L 141.90	15.68	15.71	L 147.02	16.54	16.57
L 141.74	59.68	59.68	L 146.83	64.37	64.38
L 114.63	29.83	29.85	L 136.44	45.83	45.84
L 131.85	42.43	42.44	L 114.63	29.83	29.85
L 133.63	21.28	21.31	L 138.26	20.89	20.92
L 134.30	11.43	11.47	L 139.32	11.43	11.47
L 134.63	5.67	5.76	L 134.63	5.67	5.76
L 139.63	1.13	1.51	L 144.63	1.13	1.51
L 104.63	0.72	1.23	L 104.63	0.69	1.21
L 91.67	0.69	1.21	L 91.67	0.69	1.21
L 68.98	0.74	1.25	L 73.88	0.76	1.26
L 73.25	1.06	1.46	L 76.90	1.04	1.44
L 82.06	5.67	5.76	L 84.26	5.67	5.76
L 82.85	11.43	11.47	L 84.63	11.43	11.47
L 83.48	14.86	14.89	L 84.78	14.90	14.93
L 83.48	22.90	22.92	L 84.92	21.28	21.31
L 99.63	26.27	26.29	L 99.63	26.27	26.29
L 80.18	23.86	23.88	L 81.85	14.90	14.93
L 79.96	15.26	15.29	L 81.40	11.43	11.47
L 79.63	11.43	11.47	L 80.72	5.67	5.76
L 78.61	5.67	5.76	L 70.46	1.08	1.47
L 67.04	1.09	1.48	L 66.36	0.82	1.30
L 62.02	0.79	1.28	L 61.36	0.89	1.34
L 53.72	0.90	1.34	L 65.26	1.19	1.55
L 57.92	1.19	1.55	L 66.33	1.73	2.00
L 59.63	1.73	2.00	L 65.62	2.75	2.92

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GROUND VISIBILITY PLOT - TABULAR DATA

O-1A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 59.63	2.75	2.92	L 67.13	11.43	11.47
L 61.56	11.43	11.47	L 69.63	25.34	25.36
L 74.63	25.34	25.36	L 74.63	25.34	25.36
L 63.98	25.34	25.36	L 54.63	HORIZON	HORIZON
L 47.74	HORIZON	HORIZON	L 56.85	18.05	18.08
L 51.34	18.05	18.08	L 58.11	11.43	11.47
L 51.77	11.43	11.47	L 59.63	7.11	7.18
L 52.53	5.67	5.76	L 59.17	4.27	4.38
L 51.50	2.75	2.92	L 54.63	1.73	2.00
L 48.33	1.73	2.00	L 49.63	1.61	1.90
L 43.27	1.59	1.88	L 47.02	1.41	1.73
L 39.63	1.43	1.74	L 48.76	1.27	1.62
L 42.36	1.27	1.61	L 51.90	1.19	1.55
L 45.36	1.21	1.57	L 49.63	1.08	1.47
L 43.48	1.08	1.47	L 29.63	1.81	2.07
L 24.63	1.85	2.11	L 24.63	2.04	2.27
L 17.13	2.14	2.37	L 19.63	2.21	2.43
L 12.52	2.83	3.00	L 16.21	2.57	2.76
L 25.28	5.67	5.76	L 31.77	5.67	5.76
L 31.26	11.43	11.47	L 37.71	11.43	11.47
L 32.78	15.17	15.21	L 39.18	16.12	16.15
L 37.00	HORIZON	HORIZON	L 43.26	HORIZON	HORIZON
L 34.63	HORIZON	HORIZON	L 40.76	HORIZON	HORIZON
L 30.28	15.68	15.71	L 63.98	16.12	16.15
L 28.65	11.43	11.47	L 35.20	11.43	11.47
L 22.74	5.67	5.76	L 28.86	5.67	5.76
L 6.15	3.05	3.21	L 14.63	2.75	2.92
L 8.11	3.20	3.35	L 11.72	3.13	3.29
R 1.77	HORIZON	HORIZON	L 10.51	3.20	3.35
R 1.55	15.38	15.41	L 3.52	3.20	3.35
R 1.44	11.43	11.47	L 3.74	5.67	5.76
R 1.33	5.67	5.76	L 4.19	11.43	11.47
R 1.33	3.20	3.35	L 4.34	14.90	14.93
R 4.16	HORIZON	HORIZON	L 4.63	HORIZON	HORIZON
R 3.83	14.90	14.93	L 1.13	3.20	3.35

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GROUND VISIBILITY PLOT - TABULAR DATA

O-1A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 3.70	11.43	11.47	L 1.13	5.67	5.76
R 3.62	5.67	5.76	L 1.86	11.43	11.47
R 3.18	3.20	3.35	L 1.86	14.90	14.93
R 10.36	3.20	3.35	L 1.86	HORIZON	HORIZON
R 12.29	3.02	3.19	R 7.96	3.20	3.35
R 14.14	2.75	2.92	R 10.81	3.03	3.19
R 34.67	11.43	11.47	R 27.91	11.43	11.47
R 36.09	14.90	14.93	R 30.36	17.56	17.58
R 40.80	HORIZON	HORIZON	R 34.54	HORIZON	HORIZON
R 43.55	HORIZON	HORIZON	R 37.09	HORIZON	HORIZON
R 38.59	14.41	14.44	R 32.56	15.98	16.01
R 37.56	11.43	11.47	R 30.82	11.43	11.47
R 15.58	2.58	2.77	R 11.72	2.75	2.92
R 19.62	2.19	2.40	R 17.17	2.14	2.37
R 25.36	1.97	2.21	R 25.36	1.73	2.00
R 49.67	1.07	1.46	R 43.51	1.07	1.46
R 50.36	1.17	1.54	R 44.85	1.19	1.55
R 47.28	1.43	1.74	R 42.39	1.18	1.54
R 48.99	1.55	1.85	R 40.36	1.43	1.74
R 54.06	1.68	1.96	R 42.31	1.57	1.86
R 58.76	5.67	5.76	R 48.15	1.68	1.95
R 59.11	11.43	11.47	R 51.87	3.16	3.32
R 59.14	15.34	15.37	R 52.48	5.67	5.76
R 58.99	HORIZON	HORIZON	R 52.93	11.43	11.47
R 70.80	20.97	20.99	R 52.93	15.26	15.29
R 68.25	15.68	15.71	R 52.63	HORIZON	HORIZON
R 66.88	11.43	11.47	R 65.36	20.97	20.99
R 65.93	5.67	5.76	R 62.64	17.19	17.21
R 61.66	0.88	1.33	R 61.21	11.43	11.47
R 66.66	0.83	1.30	R 59.90	5.67	5.76
R 74.55	1.73	2.00	R 58.91	2.75	2.92
R 79.79	5.67	5.76	R 55.36	0.92	1.36
R 80.92	11.43	11.47	R 62.09	0.83	1.30
R 81.75	19.88	19.90	R 71.88	1.73	2.00
R 84.81	19.88	19.90	R 77.74	5.67	5.76

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GROUND VISIBILITY PLOT - TABULAR DATA

C-1A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 84.41	11.43	11.47	R 79.36	11.43	11.47
R 83.78	5.67	5.76	R 80.02	18.64	18.67
R 80.36	1.73	2.00	R 83.18	18.64	18.67
R 74.36	0.78	1.27	R 82.93	11.43	11.47
R 110.36	0.74	1.24	R 81.88	5.67	5.76
R 143.62	1.13	1.50	R 77.63	1.73	2.00
R 140.36	2.14	2.37	R 70.36	0.81	1.29
R 138.20	5.67	5.76	R 105.36	0.74	1.24
R 137.40	11.43	11.47	R 137.86	1.13	1.50
R 136.72	15.98	16.01	R 135.36	2.14	2.37
R 134.80	29.07	29.09	R 133.35	5.67	5.76
R 145.36	50.70	50.71	R 132.86	11.43	11.47
R 145.36	16.54	16.57	R 132.19	14.90	14.93
R 145.58	11.43	11.47	R 130.36	29.83	29.85
R 145.58	5.67	5.76	R 135.45	37.44	37.45
R 148.66	1.63	1.91	R 139.90	15.68	15.71
R 159.59	2.75	2.92	R 140.36	11.43	11.47
R 161.02	3.12	3.27	R 141.01	5.67	5.76
R 161.02	3.73	3.86	R 144.05	1.60	1.89
R 160.36	5.67	5.76	R 156.77	2.75	2.92
R 159.67	11.43	11.47	R 157.96	3.16	3.31
R 159.27	27.94	27.95	R 158.19	3.73	3.86
R 157.96	66.62	66.63	R 157.38	5.67	5.76
			R 155.36	HORIZON*	HORIZON*
			R 155.36	119.36	119.37

Table 33. GROUND VISIBILITY PLOT - TABULAR DATA

O-2 PILOT (EST.), AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 116.68	1.73	2.00	L 124.50	0.80	1.28
L 115.87	1.19	1.56	L 134.06	1.03	1.44
L 114.06	0.75	1.25	L 127.50	1.61	1.90
L 126.50	0.77	1.27	L 128.53	3.20	3.35
L 130.77	1.00	1.41	L 129.70	2.75	2.92
L 119.06	1.52	1.82	L 134.06	1.73	2.00
L 120.07	2.64	2.83	L 141.03	1.19	1.56
L 117.58	3.47	3.61	L 144.06	1.04	1.44
L 126.23	2.75	2.92	L 144.20	1.19	1.56
L 136.18	1.73	2.00	L 146.55	1.09	1.48
L 136.92	1.19	1.56	L 151.55	1.28	1.62
L 139.06	1.09	1.48	L 153.32	1.43	1.74
L 144.06	1.28	1.62	L 154.20	1.73	2.00
L 146.03	1.43	1.74	L 154.63	2.14	2.37
L 146.92	1.73	2.00	L 155.08	2.75	2.92
L 147.37	2.14	2.37	L 155.52	3.73	3.86
L 147.81	2.75	2.92	L 156.08	5.67	5.76
L 148.06	3.73	3.86	L 156.55	6.35	6.43
L 148.80	5.67	5.76	L 156.08	8.05	8.11
L 149.06	6.35	6.43	L 155.77	10.81	10.68
L 148.80	8.05	8.11	L 149.06	10.75	10.79
L 148.50	10.81	10.86	L 144.06	8.37	8.40
L 144.06	10.81	10.86	L 139.06	7.28	7.35
L 139.06	10.81	10.86	L 134.06	6.41	6.49
L 137.82	10.81	10.86	L 129.06	5.93	6.01
L 137.15	9.13	9.19	L 89.06	17.00	17.03
L 134.06	8.05	8.11	L 94.06	14.79	14.83
L 129.06	7.19	7.26	L 99.06	13.40	13.44
L 121.77	6.05	6.13	L 104.06	12.43	12.47
L 69.06	16.67	16.70	L 109.06	11.43	11.47
L 74.06	15.19	15.22	L 114.06	10.78	10.83
L 79.06	13.89	13.93	L 117.69	10.52	10.57
L 84.06	13.62	12.61	L 120.09	8.18	8.24
L 89.06	12.03	12.08	L 117.92	6.95	7.02
L 94.06	11.74	11.79	L 118.30	5.67	5.76

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GROUND VISIBILITY PLOT - TABULAR DATA

O-2 PILOT (EST.), AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 99.06	HORIZON	HORIZON	L 122.92	2.52	2.72
L 104.06	10.55	10.56	L 122.69	1.43	1.74
L 109.06	10.11	10.16	L 120.42	0.76	1.26
L 109.94	10.29	10.34	L 102.83	0.72	1.23
L 108.29	5.33	5.43	L 67.66	0.75	1.25
L 110.76	5.59	5.68	L 59.06	0.77	1.26
L 112.24	3.99	4.12	L 53.00	0.84	1.30
L 112.92	3.05	3.21	L 51.44	0.92	1.36
L 112.58	2.14	2.37	L 50.87	1.00	1.41
L 111.85	1.43	1.74	L 52.69	2.14	2.37
L 109.06	0.74	1.25	L 53.26	3.73	3.86
L 89.06	0.73	1.24	L 54.06	8.56	8.62
L 56.93	0.75	1.25	L 55.65	15.26	15.29
L 44.06	0.84	1.30	L 58.26	30.63	30.64
L 42.49	0.91	1.35	L 60.79	55.09	55.09
L 41.74	1.00	1.41	L 69.91	27.53	27.55
L 43.36	3.73	3.86	L 41.14	HORIZON	HORIZON
L 43.45	6.77	6.84	L 41.18	19.08	19.11
L 45.14	13.39	13.43	L 41.66	9.51	9.57
L 46.63	27.53	27.55	L 42.03	4.19	4.31
L 49.06	41.51	41.52	L 41.24	1.73	2.00
L 54.06	38.19	38.20	L 41.29	1.07	1.46
L 30.58	HORIZON	HORIZON	L 40.93	1.02	1.43
L 30.81	18.95	18.98	L 39.06	1.04	1.44
L 30.93	9.25	9.30	L 23.03	1.90	2.14
L 32.10	4.31	4.43	L 22.92	2.27	2.48
L 31.33	1.73	2.00	L 21.24	2.51	2.70
L 32.43	1.03	1.44	L 20.27	2.75	2.92
L 22.61	1.51	1.81	L 16.90	3.12	3.28
L 17.72	2.05	2.28	L 5.65	4.79	4.89
L 17.72	2.26	2.47	L 0.	5.44	5.53
L 16.97	2.46	2.66	R 0.	5.78	5.86
L 15.08	2.75	2.92	R 5.94	6.42	6.50
L 12.62	3.12	3.28	R 10.94	6.66	6.73
L 4.06	4.59	4.70	R 16.38	6.64	6.72

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GROUND VISIBILITY PLOT - TABULAR DATA

O-2 PILOT (EST.), AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GRCLND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 0.	5.45	5.54	R 17.65	9.76	9.31
R 0.	5.44	5.53	R 18.93	18.34	18.37
R 4.49	6.28	6.36	R 20.49	HORIZON	HORIZON
R 8.33	6.60	6.68	R 23.51	HORIZON	HORIZON
R 13.53	6.60	6.68	R 22.98	55.08	55.09
R 20.28	6.50	6.57	R 22.66	19.67	19.70
R 22.27	11.43	11.47	R 23.60	11.43	11.47
R 24.57	51.61	51.62	R 24.80	9.98	10.03
R 27.87	61.60	61.61	R 25.92	7.83	7.89
R 28.66	18.95	18.98	R 25.33	6.12	6.20
R 28.57	11.43	11.47	R 35.94	5.91	6.00
R 30.03	10.56	10.61	R 41.49	5.03	5.13
R 30.94	8.65	8.71	R 49.76	4.84	4.95
R 30.94	6.95	7.02	R 51.52	4.29	4.40
R 30.59	5.93	6.01	R 52.04	3.73	3.86
R 40.94	5.67	5.76	R 50.35	2.94	3.11
R 44.34	5.08	5.18	R 55.94	2.40	2.60
R 52.57	4.94	5.04	R 63.00	2.14	2.37
R 54.69	4.56	4.67	R 64.63	2.18	2.40
R 55.49	4.13	4.25	R 65.94	2.40	2.60
R 55.49	3.73	3.86	R 67.49	5.67	5.76
R 53.38	2.93	3.09	R 67.78	9.51	9.57
R 65.94	2.14	2.37	R 67.89	19.08	19.11
R 67.46	2.14	2.37	R 68.00	HORIZON	HORIZON
R 68.65	2.26	2.47			
R 69.27	2.42	2.62			
R 71.23	5.67	5.76			
R 71.60	9.51	9.57			
R 71.96	19.08	19.11			
R 71.82	HORIZON	HORIZON			

Table 34. GROUND VISIBILITY PLOT - TABULAR DATA
OV-10A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 126.98	HORIZON	HORIZON	L 128.33	HORIZON	HORIZON
L 125.83	41.51	41.52	L 127.13	39.50	39.52
L 125.46	16.49	16.52	L 126.81	15.26	15.29
L 123.30	11.43	11.47	L 124.31	11.43	11.47
L 120.01	8.34	8.40	L 121.14	7.64	7.70
L 117.76	5.67	5.76	L 118.88	5.67	5.76
L 122.97	4.13	4.25	L 123.19	4.29	4.41
L 130.63	3.73	3.86	L 128.88	3.92	4.05
L 126.70	2.75	2.92	L 136.85	1.33	1.66
L 124.90	1.73	2.00	L 108.88	0.79	1.27
L 124.74	1.17	1.54	L 81.38	0.64	1.19
L 108.88	0.90	1.35	L 54.88	0.89	1.34
L 81.38	0.77	1.26	L 52.99	2.75	2.92
L 48.03	0.89	1.34	L 51.40	5.67	5.76
L 47.62	1.30	1.64	L 50.29	11.43	11.47
L 47.20	2.75	2.92	L 49.97	16.49	16.52
L 45.70	5.67	5.76	L 48.87	HORIZON	HORIZON
L 44.68	11.43	11.47	L 47.82	HORIZON	HORIZON
L 44.28	17.19	17.21	L 48.08	16.68	16.71
L 43.87	HORIZON	HORIZON	L 48.35	11.43	11.47
L 42.27	HORIZON	HORIZON	L 49.34	5.67	5.76
L 42.87	17.19	17.21	L 49.82	3.98	4.10
L 43.20	11.43	11.47	L 48.45	5.67	5.76
L 43.87	6.13	6.21	L 47.54	11.43	11.47
L 42.31	11.43	11.47	L 46.99	16.30	16.33
L 41.83	17.19	17.21	L 46.05	HORIZON	HORIZON
L 40.64	HORIZON	HORIZON	L 38.87	HORIZON	HORIZON
L 33.07	HORIZON	HORIZON	L 40.42	16.83	16.86
L 34.77	16.49	16.52	L 40.98	11.43	11.47
L 35.50	11.43	11.47	L 42.96	5.67	5.76
L 37.12	5.67	5.76	L 45.12	2.75	2.92
L 39.53	2.75	2.92	L 47.72	1.30	1.64
L 39.77	0.93	1.36	L 47.51	0.98	1.40
L 28.20	1.29	1.64	L 45.74	0.92	1.36
L 26.09	2.14	2.37	L 32.34	1.29	1.64

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GROUND VISIBILITY PLOT - TABULAR DATA

OV-10A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 21.69	2.67	2.85	L 30.60	2.14	2.37
L 10.60	2.45	2.65	L 27.02	2.65	2.83
L 7.42	2.72	2.90	L 13.87	2.40	2.60
L 9.19	5.67	5.76	L 10.79	2.75	2.92
L 9.52	11.43	11.47	L 11.04	2.88	3.05
L 9.58	14.58	15.01	L 12.72	2.88	3.05
L 9.83	HORIZON	HORIZON	L 12.72	4.44	4.55
L 1.18	2.69	2.87	L 12.92	5.67	5.76
L 1.47	2.43	2.63	L 13.87	11.43	11.47
L 3.87	2.36	2.56	L 13.87	15.26	15.29
L 3.87	2.67	2.85	L 14.42	HORIZON	HORIZON
L 5.23	2.67	2.85	L 5.20	2.69	2.87
L 6.80	11.43	11.47	L 5.20	2.43	2.62
L 6.80	14.56	14.59	L 7.67	2.35	2.56
L 6.80	HORIZON	HORIZON	L 7.64	2.75	2.92
L 0.65	6.50	6.57	L 8.87	2.75	2.92
L 1.40	11.43	11.47	L 10.60	5.67	5.76
L 2.05	11.43	11.47	L 11.04	11.43	11.47
L 2.05	24.47	24.49	L 11.26	16.16	16.19
L 1.40	24.47	24.49	L 11.47	HORIZON	HORIZON
L 0.67	24.47	24.49	L 1.07	6.50	6.57
L 0.67	HORIZON	HORIZON	L 1.37	8.56	8.62
L 1.90	HORIZON	HORIZON	L 2.40	8.56	8.62
L 1.90	11.43	11.47	L 2.20	6.50	6.57
L 1.86	5.32	5.41	L 6.51	6.50	6.57
L 1.90	4.79	4.89	L 7.26	11.43	11.47
R 7.67	HORIZON	HORIZON	L 7.91	11.43	11.47
R 8.57	HORIZON	HORIZON	L 7.91	24.47	24.49
R 9.56	HORIZON	HORIZON	L 7.26	24.47	24.49
R 7.67	22.90	22.92	L 6.53	24.47	24.49
R 8.57	22.90	22.92	L 6.53	HORIZON	HORIZON
R 8.57	14.23	14.26	L 7.91	HORIZON	HORIZON
R 9.56	14.23	14.26	L 7.76	4.79	4.89
R 8.57	11.43	11.47	L 4.90	4.67	4.78
R 9.56	11.43	11.47	L 3.87	3.73	3.86

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GROUND VISIBILITY PLOT - TABULAR DATA

OV-10A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 9.56	8.30	8.36	L 2.45	3.53	3.66
R 10.28	6.86	6.93	L 0.93	3.73	3.86
R 8.66	6.44	6.52	L 0.60	4.72	4.82
R 9.85	5.67	5.76	R 1.99	HORIZON	HORIZON
R 6.81	6.44	6.52	R 2.89	HORIZON	HORIZON
R 2.86	6.44	6.52	R 3.88	HORIZON	HORIZON
R 2.14	6.44	6.52	R 1.99	22.90	22.92
R 2.83	8.51	8.57	R 2.89	22.90	22.92
R 1.98	8.51	8.57	R 2.89	14.23	14.26
R 0.56	4.67	4.78	R 3.88	14.23	14.26
R 7.38	4.76	4.86	R 2.89	11.43	11.47
R 7.67	5.50	5.59	R 3.88	11.43	11.47
R 6.13	4.73	4.83	R 3.88	8.30	8.36
R 5.10	3.73	3.86	R 4.60	6.86	6.93
R 3.77	3.51	3.65	R 2.98	6.44	6.52
R 2.15	3.73	3.86	R 4.17	5.67	5.76
R 1.35	4.67	4.78	R 0.12	4.72	4.82
R 12.28	HORIZON	HORIZON	R 1.13	6.44	6.52
R 11.70	14.86	14.89	R 1.99	5.50	5.59
R 12.42	11.43	11.47	R 1.70	4.76	4.86
R 10.13	5.67	5.76	R 7.45	HORIZON	HORIZON
R 9.90	4.59	4.70	R 7.45	15.72	15.75
R 9.24	3.09	3.25	R 7.35	11.43	11.47
R 7.30	2.45	2.65	R 6.46	5.67	5.76
R 6.47	2.45	2.65	R 4.21	2.69	2.87
R 5.47	2.45	2.65	R 3.52	2.44	2.64
R 0.48	2.69	2.87	R 1.56	2.44	2.64
R 5.49	2.67	2.85	R 1.13	2.69	2.87
R 1.84	2.86	3.03	R 11.13	HORIZON	HORIZON
R 1.56	3.09	3.25	R 11.13	16.59	16.62
R 16.13	HORIZON	HORIZON	R 11.05	11.43	11.47
R 15.15	15.26	15.29	R 10.10	5.67	5.76
R 14.89	11.43	11.47	R 7.38	2.45	2.65
R 13.95	5.67	5.76	R 8.52	2.33	2.53
R 11.05	2.45	2.64	R 21.13	2.52	2.72

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GROUND VISIBILITY PLOT - TABULAR DATA

OV-10A PILOT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 12.43	2.31	2.51	R 23.55	2.14	2.37
R 26.13	2.55	2.74	R 25.76	2.10	2.32
R 29.10	2.14	2.37	R 27.74	1.25	1.60
R 30.47	2.09	2.32	R 39.21	0.93	1.37
R 32.67	1.24	1.59	R 41.13	1.43	1.74
R 46.13	0.93	1.37	R 39.65	2.75	2.92
R 48.86	1.43	1.74	R 37.30	5.67	5.76
R 46.13	2.14	2.37	R 35.76	11.43	11.47
R 42.71	5.67	5.76	R 35.09	16.16	16.19
R 41.13	11.43	11.47	R 33.62	HORIZON	HORIZON
R 40.46	15.26	15.29	R 40.75	HORIZON	HORIZON
R 38.91	HORIZON	HORIZON	R 42.03	15.26	15.29
R 46.77	HORIZON	HORIZON	R 42.48	11.43	11.47
R 47.75	16.16	16.19	R 43.96	5.67	5.76
R 48.29	11.43	11.47	R 46.56	2.14	2.37
R 49.81	5.67	5.76	R 47.76	1.43	1.74
R 51.71	2.75	2.92	R 46.13	0.93	1.37
R 54.36	0.92	1.36	R 78.97	0.77	1.26
R 78.63	0.77	1.26	R 106.99	1.00	1.41
R 116.13	0.90	1.34	R 129.20	1.81	2.07
R 136.13	1.46	1.77	R 128.72	3.73	3.86
R 133.76	3.43	3.57	R 125.46	3.84	3.97
R 128.76	3.73	3.86	R 120.76	4.15	4.27
R 125.38	3.73	3.86	R 116.56	5.44	5.53
R 121.13	4.36	4.47	R 121.09	8.68	8.74
R 118.13	5.51	5.60	R 124.42	11.96	12.00
R 121.12	8.05	8.11	R 124.43	24.37	24.39
R 125.56	12.14	12.18	R 126.13	HORIZON	HORIZON
R 126.13	25.01	25.03			
R 127.13	HORIZON	HORIZON			

Table 35. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 20 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 119.57	76.03	76.04	L 134.59	29.30	29.32
L 118.67	15.83	15.86	L 133.84	11.76	11.80
L 117.76	8.81	8.87	L 133.08	7.33	7.40
L 116.84	6.08	6.17	L 132.32	5.31	5.40
L 115.90	4.63	4.74	L 131.54	4.14	4.26
L 115.45	3.68	3.81	L 130.19	3.01	3.17
L 114.77	3.23	3.38	L 104.28	2.54	2.73
L 100.20	3.09	3.25	L 88.08	2.60	2.79
L 78.95	3.21	3.36	L 72.77	2.80	2.97
L 59.08	3.57	3.71	L 58.70	3.34	3.48
L 45.43	4.47	4.58	L 45.42	4.46	4.57
L 36.53	13.80	13.84	L 43.59	4.83	4.93
L 36.80	6.08	6.17	L 34.93	15.07	15.10
L 36.53	13.80	13.84	L 42.52	10.26	10.31
L 29.71	20.72	20.74	L 34.93	15.07	15.10
L 29.00	7.38	7.45	L 34.47	6.45	6.53
L 18.16	16.31	16.34	L 23.02	12.32	12.36
L 18.25	54.46	54.47	L 23.45	33.09	33.10
R 25.28	28.51	28.53	L 23.48	74.78	74.79
R 25.23	11.27	11.32	R 20.16	44.66	44.67
R 34.17	6.50	6.57	R 20.33	24.03	24.05
R 34.95	15.05	15.08	R 20.28	13.14	13.17
R 41.93	HORIZON*	HORIZON*	R 22.25	11.06	11.11
R 42.54	10.25	10.30	R 26.55	7.82	7.89
R 43.24	5.18	5.28	R 28.49	6.86	6.93
R 39.72	5.05	5.14	R 29.52	20.99	21.01
R 44.11	4.51	4.62	R 36.63	13.73	13.76
R 53.00	3.75	3.88	R 37.20	6.02	6.11
R 71.49	2.88	3.04	R 39.72	5.05	5.14
R 86.61	2.62	2.81	R 44.20	4.63	4.74
R 102.69	2.53	2.72	R 48.68	4.24	4.35
R 119.69	2.69	2.87	R 53.21	3.93	4.05
R 130.57	2.99	3.15	R 57.81	3.67	3.81
R 131.14	3.38	3.52	R 62.58	3.52	3.66
R 131.91	4.11	4.23	R 72.38	3.28	3.43

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 20 DEGREES PITCH UP

LEFT EYE

HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 132.69	5.26	5.35
R 133.45	7.24	7.31
R 134.20	11.54	11.58
R 134.95	27.98	28.00

RIGHT EYE

HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 77.48	3.22	3.38
R 87.77	3.07	3.23
R 98.53	3.04	3.20
R 109.69	3.16	3.31

Table 36. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 17 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.80	26.37	26.39	L 133.98	20.60	20.63
L 118.03	11.27	11.31	L 133.34	10.00	10.05
L 117.24	7.14	7.21	L 132.69	6.58	6.66
L 116.45	5.21	5.30	L 132.03	4.88	4.99
L 116.16	4.04	4.16	L 130.90	3.39	3.53
L 115.57	3.50	3.64	L 105.40	2.64	2.83
L 101.13	3.20	3.35	L 89.23	2.59	2.78
L 79.88	3.10	3.26	L 73.82	2.67	2.85
L 59.84	3.24	3.39	L 59.51	3.04	3.20
L 45.96	3.81	3.94	L 45.95	3.80	3.93
L 39.75	4.20	4.32	L 44.06	4.05	4.17
L 37.14	4.82	4.92	L 43.06	4.84	4.94
L 36.70	8.71	8.76	L 42.76	7.33	7.39
L 30.51	HORIZON*	HORIZON*	L 34.94	49.78	49.79
L 29.82	10.64	10.69	L 35.08	9.13	9.18
L 29.23	5.48	5.57	L 34.77	5.01	5.11
L 18.24	8.97	9.03	L 23.14	7.70	7.76
L 18.29	14.66	14.70	L 23.51	12.75	12.79
L 13.04	22.71	22.74	L 23.53	16.27	16.30
R 18.50	HORIZON*	HORIZON*	L 23.05	26.04	26.06
R 23.02	21.37	21.39	L 20.88	82.97	82.98
R 25.35	12.11	12.15	R 13.67	HORIZON*	HORIZON*
R 25.37	7.32	7.39	R 18.24	20.96	20.99
R 34.47	5.04	5.14	R 20.21	13.95	13.99
R 35.11	9.12	9.17	R 20.40	11.00	11.04
R 34.55	52.92	52.93	R 20.39	7.95	8.02
R 41.98	22.93	22.95	R 22.38	7.17	7.24
R 42.77	7.32	7.39	R 26.76	5.69	5.78
R 43.68	4.30	4.41	R 28.74	5.18	5.27
R 40.14	4.16	4.28	R 29.62	10.70	10.75
R 44.61	3.82	3.95	R 28.99	HORIZON*	HORIZON*
R 53.68	3.33	3.48	R 36.25	41.39	41.40
R 72.51	2.73	2.91	R 36.80	8.68	8.74
R 87.76	2.60	2.79	R 37.55	4.78	4.89
R 103.83	2.63	2.81	R 40.14	4.16	4.28

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 17 DEGREES PITCH UP

LEFT EYE

HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 120.61	2.93	3.09
R 131.29	3.37	3.51
R 131.76	3.87	4.00
R 132.41	4.85	4.95
R 133.07	6.52	6.59
R 133.71	9.86	9.91
R 134.35	20.03	20.05

RIGHT EYE

HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 44.69	3.91	4.04
R 49.25	3.67	3.80
R 53.86	3.47	3.61
R 58.54	3.31	3.46
R 63.37	3.22	3.38
R 73.28	3.11	3.27
R 78.41	3.10	3.26

Table 37. GROUND VISIBILITY PLOT - TABULAR DATA
RF-4C FRONT, 13 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.88	HORIZON*	HORIZON*	L 133.56	19.35	19.38
L 118.28	17.99	18.02	L 133.07	9.65	9.70
L 117.68	9.32	9.38	L 132.57	6.40	6.48
L 117.08	6.27	6.35	L 131.72	4.07	4.19
L 116.98	4.66	4.77	L 106.81	2.81	2.98
L 116.54	3.96	4.08	L 90.78	2.59	2.78
L 102.33	3.37	3.51	L 75.30	2.53	2.72
L 81.18	2.99	3.15	L 60.72	2.71	2.89
L 60.98	2.88	3.05	L 46.78	3.17	3.32
L 46.79	3.18	3.33	L 44.83	3.33	3.48
L 40.44	3.39	3.53	L 43.70	3.84	3.97
L 37.71	3.76	3.89	L 43.20	5.29	5.39
L 37.04	5.82	5.90	L 41.40	HORIZON*	HORIZON*
L 28.05	73.09	73.09	L 35.06	12.91	12.95
L 28.85	HORIZON*	HORIZON*	L 35.40	5.96	6.04
L 30.59	14.82	14.85	L 35.29	3.85	3.98
L 30.06	6.43	6.51	L 23.40	5.11	5.20
L 29.65	4.06	4.18	L 23.69	6.98	7.05
L 18.42	5.58	5.67	L 23.68	7.93	8.00
L 18.42	7.40	7.46	L 23.16	9.71	9.76
L 18.14	9.02	9.08	L 20.94	12.91	12.95
L 10.40	56.27	56.28	L 16.54	34.71	34.72
R 15.52	28.85	28.86	R 9.86	33.56	33.58
R 18.54	14.87	14.91	R 13.71	13.91	13.94
R 23.14	8.97	9.03	R 18.34	8.74	8.79
R 25.55	6.83	6.90	R 20.35	7.25	7.32
R 25.66	4.96	5.06	R 20.57	6.35	6.43
R 34.99	3.86	3.99	R 20.61	5.19	5.28
R 35.43	5.96	6.04	R 22.64	4.86	4.96
R 34.66	13.07	13.11	R 27.13	4.15	4.27
R 41.22	HORIZON*	HORIZON*	R 29.17	3.89	4.01
R 42.16	10.45	10.49	R 29.87	6.45	6.53
R 43.22	5.29	5.38	R 29.06	15.53	15.57
R 44.40	3.49	3.63	R 36.37	12.41	12.45
R 40.84	3.36	3.51	R 37.14	5.81	5.89

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRCNT, 13 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 45.43	3.17	3.33	R 38.13	3.74	3.87
R 54.73	2.90	3.06	R 40.84	3.36	3.51
R 73.96	2.57	2.76	R 45.49	3.24	3.39
R 89.30	2.59	2.77	R 50.16	3.11	3.26
R 105.26	2.77	2.95	R 54.87	3.01	3.17
R 121.72	3.31	3.46	R 59.65	2.93	3.09
R 132.10	4.05	4.17	R 64.55	2.91	3.07
R 132.46	4.78	4.89	R 74.56	2.91	3.08
R 132.95	6.36	6.43	R 79.70	2.97	3.13
R 133.44	9.55	9.60	R 90.07	3.04	3.20
R 133.94	18.95	18.98	R 100.73	3.26	3.41
R 134.42	HORIZON*	HORIZON*	R 111.61	3.71	3.84
			R 119.84	HORIZON*	HORIZON*
			R 119.84	131.56	131.57

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

Table 38. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 10 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GRCUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GRCUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.40	32.59	32.60	L 133.63	64.42	64.43
L 117.94	12.10	12.15	L 133.25	14.80	14.83
L 117.47	7.41	7.48	L 132.87	8.33	8.39
L 117.52	5.28	5.37	L 132.22	4.79	4.89
L 117.18	4.39	4.50	L 107.81	2.95	3.12
L 103.18	3.52	3.66	L 91.93	2.60	2.79
L 82.18	2.91	3.08	L 76.48	2.44	2.63
L 61.93	2.66	2.84	L 61.73	2.52	2.71
L 47.53	2.82	2.99	L 47.52	2.82	2.99
L 41.06	2.95	3.12	L 45.51	2.93	3.10
L 38.25	3.22	3.37	L 44.29	3.32	3.47
L 37.39	4.65	4.75	L 43.63	4.37	4.49
L 35.11	31.08	31.10	L 41.45	22.56	22.58
L 28.22	HORIZON*	HORIZON*	L 33.47	34.11	34.13
L 27.11	40.55	40.57	L 35.23	8.29	8.35
L 28.10	16.68	16.71	L 35.73	4.72	4.82
L 28.89	18.55	18.57	L 35.79	3.27	3.42
L 30.73	8.86	8.91	L 23.67	4.06	4.18
L 30.33	4.95	5.05	L 23.89	5.20	5.29
L 30.06	3.39	3.54	L 23.86	5.71	5.80
L 18.62	4.33	4.44	L 23.31	6.58	6.66
L 18.57	5.37	5.46	L 21.05	7.88	7.95
L 18.27	6.19	6.27	L 16.58	12.63	12.67
L 10.42	14.41	14.45	L 15.48	HORIZON*	HORIZON*
R 15.13	HORIZON*	HORIZON*	R 8.79	HORIZON*	HORIZON*
R 15.56	11.72	11.76	R 5.52	25.68	25.70
R 18.63	8.52	8.58	R 5.89	12.26	12.30
R 23.30	6.23	6.31	R 13.78	8.11	8.17
R 25.77	5.13	5.22	R 18.47	6.06	6.14
R 25.96	3.98	4.11	R 20.52	5.31	5.40
R 35.48	3.28	3.43	R 20.77	4.81	4.91
R 35.76	4.72	4.82	R 20.84	4.10	4.22
R 34.83	8.34	8.40	R 22.91	3.89	4.02
R 33.40	34.25	34.26	R 27.50	3.44	3.58
R 41.27	22.74	22.77	R 29.59	3.26	3.41

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 10 DEGREES PITCH UP

LEFT EYE

RIGHT EYE

HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GRCLND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 42.40	7.41	7.47	R 30.13	4.95	5.05
R 43.65	4.37	4.48	R 29.19	9.05	9.11
R 45.05	3.06	3.22	R 27.69	49.43	49.44
R 41.47	2.93	3.10	R 35.21	30.92	30.93
R 46.15	2.81	2.98	R 36.55	8.12	8.18
R 55.62	2.64	2.82	R 37.50	4.64	4.75
R 75.11	2.47	2.66	R 38.67	3.21	3.36
R 90.46	2.59	2.77	R 41.47	2.93	3.10
R 106.28	2.90	3.07	R 46.20	2.86	3.03
R 122.44	3.68	3.82	R 50.94	2.79	2.96
R 132.61	4.77	4.87	R 55.73	2.73	2.91
R 132.88	5.80	5.89	R 60.58	2.69	2.87
R 133.25	8.28	8.34	R 65.52	2.71	2.89
R 133.63	14.62	14.65	R 75.57	2.79	2.96
R 134.01	61.15	61.16	R 80.71	2.88	3.05

Table 39. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 7 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GRCLND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.44	HORIZON*	HORIZON*	L 133.36	31.69	31.71
L 118.12	17.28	17.31	L 133.10	11.92	11.96
L 117.80	9.06	9.12	L 132.65	5.80	5.89
L 117.99	6.08	6.17	L 108.75	3.12	3.28
L 117.76	4.94	5.04	L 93.08	2.62	2.80
L 103.99	3.69	3.82	L 77.70	2.36	2.56
L 83.22	2.85	3.02	L 62.82	2.35	2.55
L 62.97	2.48	2.67	L 48.36	2.53	2.72
L 48.36	2.54	2.73	L 46.29	2.62	2.80
L 41.78	2.61	2.79	L 44.96	2.92	3.09
L 38.87	2.80	2.98	L 44.15	3.72	3.85
L 37.82	3.86	3.99	L 41.57	11.95	11.99
L 35.20	13.31	13.35	L 33.56	13.68	13.72
L 28.26	19.06	19.09	L 35.47	6.09	6.17
L 27.17	14.01	14.05	L 36.14	3.90	4.02
L 28.22	9.39	9.45	L 36.37	2.83	3.01
L 29.00	10.00	10.05	L 24.00	3.36	3.51
L 30.93	6.30	6.38	L 24.16	4.12	4.24
L 30.68	4.01	4.13	L 24.10	4.45	4.56
L 30.54	2.90	3.07	L 23.52	4.96	5.06
L 18.87	3.52	3.66	L 21.21	5.65	5.74
L 18.77	4.20	4.32	L 16.67	7.70	7.76
L 18.44	4.70	4.80	L 15.50	19.49	19.51
L 10.47	8.24	8.30	R 7.96	40.98	40.99
L 9.01	31.18	31.19	R 8.81	18.56	18.59
L 9.72	57.22	57.23	R 9.55	11.01	11.06
R 14.14	37.10	37.12	R 9.94	7.48	7.54
R 15.16	17.63	17.66	R 13.89	5.71	5.79
R 15.65	7.33	7.40	R 18.66	4.62	4.72
R 18.77	5.95	6.04	R 20.75	4.17	4.29
R 23.53	4.76	4.86	R 21.02	3.85	3.98
R 26.06	4.09	4.21	R 21.13	3.37	3.52
R 26.32	3.31	3.46	R 23.24	3.24	3.39
R 36.05	2.84	3.01	R 27.94	2.93	3.09
R 36.17	3.90	4.02	R 30.08	2.80	2.97

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 7 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 35.07	6.11	6.19	R 30.48	4.01	4.13
R 33.49	13.70	13.73	R 29.38	6.37	6.45
R 41.40	11.98	12.02	R 27.75	15.00	15.03
R 42.71	5.73	5.82	R 35.30	13.29	13.33
R 44.17	3.72	3.85	R 36.81	6.02	6.10
R 45.79	2.72	2.89	R 37.93	3.86	3.94
R 42.19	2.60	2.78	R 39.30	2.80	2.97
R 46.97	2.52	2.71	R 42.19	2.60	2.78
R 56.61	2.42	2.62	R 47.00	2.56	2.75
R 76.31	2.38	2.58	R 51.83	2.52	2.71
R 91.62	2.59	2.78	R 56.69	2.50	2.69
R 107.25	3.05	3.21	R 61.59	2.50	2.69
R 123.09	4.14	4.26	R 66.56	2.54	2.73
R 133.03	5.78	5.87	R 76.64	2.68	2.86
R 133.22	7.37	7.44	R 81.76	2.81	2.98
R 133.48	11.84	11.88	R 92.03	3.06	3.22
R 133.74	31.12	31.13	R 102.46	3.53	3.67
			R 119.43	HORIZON*	HORIZON*
			R 119.43	131.67	131.67

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

Table 40. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 5 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.21	24.18	24.20	L 133.39	HORIZON*	HORIZON*
L 117.98	10.66	10.71	L 133.20	16.70	16.73
L 118.27	6.78	6.85	L 132.88	6.76	6.83
L 118.10	5.39	5.48	L 109.34	3.25	3.40
L 104.50	3.82	3.95	L 93.84	2.64	2.82
L 83.92	2.82	2.99	L 78.53	2.31	2.52
L 63.70	2.37	2.57	L 63.60	2.25	2.46
L 48.97	2.37	2.58	L 48.97	2.37	2.57
L 42.31	2.42	2.62	L 46.86	2.44	2.64
L 39.34	2.58	2.77	L 45.47	2.70	2.88
L 38.16	3.46	3.61	L 44.54	3.38	3.53
L 35.30	9.63	9.68	L 41.70	9.09	9.14
L 33.56	68.53	68.54	L 39.45	50.13	50.14
L 26.01	HORIZON*	HORIZON*	L 31.75	76.35	76.35
L 28.33	12.00	12.04	L 33.65	9.77	9.82
L 27.25	9.74	9.79	L 35.68	5.17	5.26
L 28.34	7.26	7.33	L 36.46	3.49	3.63
L 29.11	7.64	7.70	L 36.81	2.60	2.79
L 31.11	5.28	5.37	L 24.25	3.01	3.17
L 30.95	3.55	3.69	L 24.37	3.62	3.75
L 30.91	2.64	2.82	L 24.30	3.87	3.99
L 19.06	3.13	3.28	L 23.70	4.26	4.37
L 18.94	3.66	3.79	L 21.35	4.75	4.85
L 18.59	4.03	4.16	L 16.76	6.10	6.18
L 10.53	6.40	6.47	L 15.54	11.75	11.79
I 9.02	15.01	15.04	L 13.08	45.10	45.11
L 9.73	19.26	19.28	L 13.10	HORIZON*	HORIZON*
L 8.60	30.04	30.06	L 9.19	HORIZON*	HORIZON*
L 9.27	HORIZON*	HORIZON*	L 4.98	HORIZON*	HORIZON*
L 5.68	HORIZON*	HORIZON*	R C.	HORIZON*	HORIZON*
R 0.	HORIZON*	HORIZON*	R 3.70	HORIZON*	HORIZON*
R 5.92	HORIZON*	HORIZON*	R 5.52	HORIZON*	HORIZON*
R 8.89	HORIZON*	HORIZON*	R 9.25	HORIZON*	HORIZON*
R 9.25	HORIZON*	HORIZON*	R 7.97	16.94	16.97
R 13.68	HORIZON*	HORIZON*	R 8.83	11.29	11.34

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 5 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 12.98	32.03	32.04	R 9.59	7.96	8.02
R 14.16	16.43	16.46	R 9.99	5.92	6.00
R 15.19	11.04	11.08	R 13.98	4.75	4.86
R 15.74	5.85	5.94	R 18.81	3.98	4.10
R 18.89	4.95	5.05	R 20.93	3.64	3.78
R 23.71	4.10	4.22	R 21.22	3.39	3.54
R 26.29	3.60	3.73	R 21.36	3.01	3.17
R 26.61	2.97	3.14	R 23.50	2.90	3.07
R 36.49	2.60	2.79	R 28.28	2.66	2.84
R 36.49	3.49	3.63	R 30.46	2.55	2.74
R 35.28	5.18	5.27	R 30.75	3.55	3.69
R 33.58	9.77	9.82	R 29.55	5.31	5.40
R 31.71	76.53	76.54	R 27.83	10.23	10.28
R 39.95	48.94	48.95	R 25.73	HORIZON*	HORIZON*
R 41.52	9.10	9.16	R 33.63	68.25	68.26
R 42.97	4.97	5.07	R 35.40	9.62	9.67
R 44.56	3.38	3.53	R 37.03	5.13	5.23
R 46.34	2.53	2.72	R 38.27	3.46	3.60
R 42.73	2.41	2.61	R 39.78	2.58	2.76
R 47.57	2.36	2.56	R 42.73	2.41	2.61
R 57.32	2.30	2.50	R 47.60	2.39	2.59
R 77.13	2.33	2.53	R 52.47	2.37	2.58
R 92.39	2.60	2.79	R 57.38	2.37	2.57
R 107.86	3.16	3.31	R 62.31	2.38	2.58
R 123.48	4.52	4.63	R 67.30	2.44	2.64
R 133.26	6.74	6.81	R 77.37	2.62	2.81
R 133.40	8.98	9.03	R 82.47	2.77	2.94
R 133.58	16.58	16.61	R 92.68	3.08	3.24
R 133.77	HORIZON*	HORIZON*	R 103.01	3.63	3.77

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

Table 41. GROUND VISIBILITY PLOT - TABULAR DATA

RF-40 FRONT, 3 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.27	40.29	40.30	L 133.27	27.84	27.85
L 118.13	12.94	12.98	L 133.08	8.08	8.14
L 118.51	7.66	7.72	L 105.91	3.39	3.53
L 118.41	5.94	6.02	L 94.59	2.66	2.84
L 105.00	3.96	4.09	L 75.39	2.27	2.48
L 84.63	2.78	2.96	L 64.41	2.16	2.38
L 64.48	2.27	2.48	L 49.63	2.23	2.44
L 49.63	2.23	2.44	L 47.49	2.28	2.49
L 42.89	2.25	2.47	L 46.02	2.51	2.71
L 39.85	2.39	2.59	L 44.98	3.10	3.25
L 38.54	3.14	3.29	L 41.87	7.33	7.39
L 35.44	7.53	7.60	L 39.49	21.31	21.33
L 33.59	22.88	22.90	L 38.21	68.71	68.72
L 26.04	24.84	24.86	L 31.78	23.36	23.38
L 28.42	8.74	8.80	L 33.78	7.58	7.65
L 27.36	7.46	7.52	L 35.93	4.48	4.59
L 28.48	5.91	6.00	L 36.82	3.15	3.30
L 29.26	6.17	6.25	L 37.29	2.40	2.60
L 31.33	4.53	4.64	L 24.54	2.71	2.89
L 31.26	3.18	3.34	L 24.62	3.21	3.37
L 31.32	2.42	2.62	L 24.53	3.42	3.56
L 19.29	2.80	2.98	L 23.90	3.72	3.85
L 19.13	3.24	3.39	L 21.52	4.09	4.21
L 18.76	3.53	3.67	L 16.86	5.04	5.13
L 10.59	5.22	5.31	L 15.59	8.40	8.46
L 9.05	9.87	9.92	L 13.09	17.78	17.81
L 9.75	11.56	11.60	L 13.11	27.55	27.57
L 8.62	14.73	14.76	L 9.20	23.38	23.40
L 9.28	23.38	23.40	L 4.98	23.65	23.67
L 9.58	57.18	57.19	R C.	23.76	23.78
L 5.70	74.91	74.91	R 3.71	23.70	23.72
L 5.69	23.61	23.63	R 5.52	23.62	23.64
R 0.	23.76	23.78	R 9.26	28.08	28.10
R 5.93	23.60	23.62	R 7.99	10.66	10.71
R 8.90	23.41	23.43	R 8.86	8.10	8.16

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 3 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 9.26	23.38	23.40	R 9.64	6.22	6.30
R 9.71	57.12	57.13	R 10.06	4.89	4.99
R 14.26	70.50	70.51	R 14.09	4.06	4.18
R 13.69	27.46	27.48	R 18.98	3.49	3.63
R 13.00	15.31	15.34	R 21.14	3.23	3.38
R 14.20	10.53	10.58	R 21.44	3.03	3.19
R 15.25	8.02	8.08	R 21.62	2.71	2.89
R 15.84	4.86	4.97	R 23.79	2.63	2.81
R 19.03	4.22	4.34	R 28.65	2.43	2.63
R 23.92	3.60	3.73	R 30.88	2.34	2.55
R 26.55	3.21	3.36	R 31.05	3.18	3.34
R 26.92	2.69	2.87	R 29.75	4.55	4.66
R 36.97	2.40	2.60	R 27.93	7.75	7.81
R 36.85	3.15	3.30	R 25.75	24.91	24.93
R 35.52	4.49	4.60	R 33.66	22.86	22.88
R 33.71	7.59	7.65	R 35.54	7.53	7.60
R 31.74	23.37	23.39	R 37.28	4.47	4.58
R 39.21	47.09	47.10	R 38.65	3.14	3.29
R 39.99	21.18	21.20	R 40.29	2.39	2.59
R 41.69	7.33	7.40	R 43.32	2.25	2.46
R 43.26	4.39	4.50	R 48.24	2.24	2.46
R 45.00	3.10	3.25	R 53.17	2.24	2.45
R 46.94	2.36	2.56	R 58.11	2.25	2.46
R 43.32	2.25	2.46	R 63.07	2.28	2.49
R 48.22	2.21	2.43	R 68.07	2.35	2.56
R 58.07	2.18	2.40	R 78.13	2.56	2.75
R 77.98	2.28	2.49	R 83.19	2.73	2.91
R 93.15	2.62	2.80	R 93.33	3.10	3.25
R 108.45	3.28	3.43	R 103.53	3.75	3.88
R 123.83	4.98	5.08	R 113.78	5.04	5.14
R 133.46	8.06	8.13	R 118.88	5.86	5.94
R 133.54	11.48	11.52	R 119.03	8.83	8.88
R 133.65	27.64	27.66	R 119.26	39.04	39.05

Table 42. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 2 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.29	60.43	60.44	L 133.29	41.76	41.77
L 118.19	14.49	14.53	L 133.16	8.96	9.01
L 118.62	8.19	8.25	L 110.18	3.46	3.61
L 118.55	6.26	6.34	L 94.97	2.67	2.85
L 105.24	4.04	4.16	L 79.83	2.25	2.46
L 84.99	2.77	2.95	L 64.84	2.12	2.34
L 64.88	2.23	2.44	L 49.98	2.16	2.38
L 49.98	2.16	2.38	L 47.82	2.21	2.43
L 43.20	2.18	2.40	L 46.31	2.43	2.63
L 40.13	2.30	2.51	L 45.21	2.97	3.13
L 38.74	3.00	3.16	L 41.96	6.68	6.75
L 35.52	6.79	6.87	L 39.53	16.55	16.58
L 33.62	17.16	17.19	L 38.23	35.37	35.38
L 26.06	17.86	17.89	L 31.80	17.34	17.37
L 28.48	7.70	7.76	L 33.86	6.82	6.89
L 27.43	6.67	6.74	L 36.06	4.20	4.32
L 28.57	5.41	5.50	L 37.02	3.00	3.17
L 29.34	5.63	5.71	L 37.55	2.31	2.51
L 31.45	4.23	4.35	L 24.70	2.59	2.77
L 31.43	3.02	3.18	L 24.75	3.04	3.20
L 31.54	2.32	2.53	L 24.66	3.22	3.38
L 19.41	2.66	2.85	L 24.01	3.49	3.63
L 19.23	3.06	3.22	L 21.61	3.82	3.94
L 18.85	3.32	3.47	L 16.92	4.63	4.74
L 10.63	4.77	4.88	L 15.63	7.34	7.41
L 9.07	8.42	8.48	L 13.11	13.64	13.68
L 9.77	9.63	9.68	L 13.12	18.75	18.78
L 8.63	11.73	11.77	L 9.21	16.66	16.69
L 9.29	16.65	16.68	L 4.99	16.74	16.77
L 9.58	28.81	28.83	R C.	16.78	16.81
L 9.92	68.21	68.22	R 3.71	16.76	16.79
L 5.74	HORIZON*	HORIZON*	R 5.53	16.74	16.77
L 5.70	32.54	32.56	R 5.01	63.12	63.13
L 5.69	16.73	16.76	R 5.94	62.90	62.91
R 0.	16.78	16.81	R 5.27	18.91	18.94

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT; 2 DEGREES PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 5.93	16.73	16.76	R 8.00	8.99	9.04
R 8.91	16.66	16.69	R 8.88	7.09	7.16
R 9.27	16.65	16.68	R 9.66	5.60	5.69
R 9.71	28.80	28.82	R 10.10	4.49	4.60
R 14.27	32.15	32.16	R 14.15	3.79	3.92
R 13.70	18.72	18.75	R 19.08	3.28	3.43
R 13.02	12.13	12.17	R 21.26	3.05	3.21
R 14.23	8.93	8.98	R 21.57	2.87	3.04
R 15.29	7.05	7.12	R 21.76	2.58	2.77
R 15.90	4.48	4.59	R 23.95	2.51	2.70
R 19.11	3.93	4.06	R 28.85	2.33	2.53
R 24.03	3.39	3.53	R 31.10	2.25	2.46
R 26.70	3.04	3.20	R 31.22	3.02	3.18
R 27.10	2.57	2.76	R 29.87	4.24	4.36
R 37.22	2.31	2.52	R 28.00	6.91	6.98
R 37.05	3.00	3.17	R 25.77	17.89	17.92
R 35.65	4.20	4.32	R 33.69	17.15	17.18
R 33.79	6.82	6.89	R 35.62	6.79	6.86
R 31.76	17.34	17.37	R 37.42	4.19	4.31
R 39.23	28.76	28.78	R 38.85	3.00	3.16
R 40.02	16.49	16.52	R 40.57	2.30	2.51
R 41.78	6.68	6.76	R 43.63	2.17	2.39
R 43.42	4.15	4.27	R 48.58	2.18	2.40
R 45.23	2.97	3.13	R 53.53	2.18	2.40
R 47.25	2.28	2.49	R 58.49	2.20	2.41
R 43.63	2.17	2.39	R 63.47	2.23	2.45
R 48.57	2.14	2.37	R 68.47	2.31	2.52
R 58.47	2.13	2.35	R 78.51	2.54	2.73
R 78.41	2.26	2.47	R 83.55	2.71	2.89
R 93.53	2.63	2.81	R 93.65	3.11	3.27
R 108.74	3.35	3.50	R 103.79	3.81	3.94
R 123.99	5.24	5.33	R 113.95	5.23	5.33
R 133.55	8.94	9.00	R 119.02	6.17	6.25
R 133.60	13.33	13.37	R 119.12	9.55	9.60
R 133.67	41.47	41.48	R 119.28	58.56	58.57

Table 43. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 1 DEGREE PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.30	HORIZON*	HORIZON*	L 133.31	83.53	83.53
L 118.25	16.47	16.50	L 133.24	10.04	10.09
L 118.72	8.80	8.86	L 110.45	3.54	3.68
L 118.69	6.61	6.69	L 95.34	2.68	2.86
L 105.48	4.12	4.24	L 80.27	2.23	2.44
L 85.35	2.76	2.93	L 65.27	2.08	2.31
L 65.29	2.18	2.40	L 50.34	2.10	2.32
L 50.34	2.10	2.33	L 48.16	2.14	2.37
L 43.52	2.11	2.33	L 46.61	2.35	2.55
L 40.41	2.22	2.43	L 45.45	2.85	3.02
L 38.96	2.87	3.04	L 42.07	6.13	6.21
L 35.61	6.18	6.26	L 39.57	13.52	13.56
L 33.66	13.72	13.76	L 38.25	23.81	23.83
L 23.31	64.25	64.26	L 28.61	73.25	73.26
L 23.80	HORIZON*	HORIZON*	L 29.45	HORIZON*	HORIZON*
L 26.08	13.94	13.98	L 31.84	13.78	13.82
L 28.55	6.87	6.94	L 33.95	6.19	6.27
L 27.50	6.03	6.11	L 36.21	3.95	4.08
L 28.66	4.98	5.08	L 37.22	2.87	3.04
L 29.43	5.17	5.26	L 37.82	2.22	2.44
L 31.57	3.97	4.09	L 24.87	2.47	2.66
L 31.60	2.88	3.05	L 24.89	2.89	3.06
L 31.77	2.23	2.44	L 24.79	3.05	3.21
L 19.53	2.54	2.73	L 24.13	3.29	3.44
L 19.34	2.89	3.06	L 21.71	3.58	3.71
L 18.95	3.13	3.29	L 16.99	4.28	4.40
L 10.67	4.39	4.51	L 15.67	6.52	6.60
L 9.09	7.33	7.40	L 13.13	11.06	11.10
L 9.79	8.24	8.31	L 12.13	14.21	14.24
L 8.64	9.74	9.79	L 9.22	12.93	12.97
L 9.30	12.93	12.97	L 4.99	12.95	12.99
L 9.59	19.25	19.27	R 0.	12.97	13.00
L 9.92	31.38	31.40	R 3.71	12.96	13.00
L 5.74	52.80	52.81	R 5.53	12.95	12.99
L 5.70	20.78	20.80	R 5.02	30.08	30.10

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-40 FRONT, 1 DEGREE PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 5.70	12.95	12.99	R 5.95	30.06	30.08
R 0.	12.97	13.00	R 6.27	86.03	86.03
R 5.94	12.95	12.99	R 9.28	14.25	14.29
R 8.92	12.93	12.97	R 8.02	7.76	7.83
R 9.28	12.93	12.97	R 8.90	6.30	6.38
R 9.72	19.24	19.27	R 9.70	5.09	5.19
R 14.28	20.81	20.83	R 10.14	4.16	4.27
R 13.71	14.20	14.23	R 14.22	3.54	3.68
R 13.04	10.04	10.09	R 19.18	3.10	3.25
R 14.25	7.74	7.80	R 21.38	2.89	3.06
R 15.33	6.29	6.37	R 21.70	2.73	2.90
R 15.96	4.15	4.27	R 21.90	2.46	2.66
R 19.20	3.68	3.81	R 24.12	2.39	2.59
R 24.16	3.20	3.35	R 29.07	2.23	2.45
R 26.95	2.89	3.05	R 31.33	2.16	2.38
R 27.28	2.46	2.65	R 31.39	2.88	3.05
R 37.49	2.22	2.44	R 29.99	3.97	4.09
R 37.25	2.87	3.04	R 28.07	6.23	6.31
R 35.80	3.95	4.08	R 25.80	13.95	13.99
R 33.88	6.19	6.27	R 33.73	13.72	13.76
R 31.80	13.78	13.82	R 35.71	6.18	6.26
R 39.26	20.70	20.72	R 37.57	3.95	4.07
R 40.07	13.50	13.54	R 39.06	2.87	3.04
R 41.89	6.14	6.22	R 40.86	2.22	2.43
R 43.59	3.93	4.05	R 43.95	2.10	2.33
R 45.47	2.85	3.02	R 48.93	2.11	2.34
R 47.38	2.21	2.43	R 53.90	2.12	2.34
R 43.95	2.10	2.33	R 58.89	2.15	2.37
R 48.92	2.08	2.31	R 63.87	2.19	2.40
R 58.87	2.08	2.31	R 68.88	2.27	2.48
R 78.85	2.24	2.45	R 78.90	2.51	2.70
R 93.91	2.63	2.82	R 83.92	2.70	2.88
R 109.02	3.42	3.56	R 93.97	3.12	3.28
R 124.14	5.53	5.62	R 104.04	3.88	4.01
R 133.62	10.03	10.08	R 114.13	5.44	5.53

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 1 DEGREE PITCH UP

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 133.65	15.89	15.92	R 119.16	6.52	6.60
R 133.69	82.94	82.95	R 119.21	10.41	10.45
			R 119.29	HORIZON*	HORIZON*
			R 119.29	117.11	117.12

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

Table 44. GROUND VISIBILITY PLCT - TABLLAR DATA

RF-4C FRONT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.30	HORIZON	HORIZON	L 133.31	HORIZON	HORIZON
L 118.30	19.08	19.11	L 133.31	11.43	11.47
L 118.82	9.51	9.57	L 110.71	3.63	3.76
L 118.82	7.01	7.08	L 95.71	2.70	2.88
L 105.71	4.21	4.32	L 80.71	2.21	2.43
L 85.71	2.75	2.92	L 65.71	2.04	2.27
L 65.71	2.14	2.37	L 50.71	2.04	2.27
L 50.71	2.04	2.28	L 48.51	2.08	2.31
L 43.85	2.04	2.27	L 46.93	2.27	2.48
L 40.71	2.14	2.37	L 45.71	2.75	2.92
L 39.18	2.75	2.92	L 42.18	5.67	5.76
L 35.71	5.67	5.76	L 39.62	11.43	11.47
L 33.70	11.43	11.47	L 38.28	17.94	17.97
L 29.98	HORIZON	HORIZON	L 36.61	HORIZON	HORIZON
L 21.60	HORIZON	HORIZON	L 27.27	HORIZON	HORIZON
L 23.32	31.64	31.66	L 28.62	34.50	34.52
L 23.81	45.83	45.84	L 29.46	45.83	45.84
L 26.12	11.43	11.47	L 31.88	11.43	11.47
L 28.62	6.20	6.28	L 34.04	5.67	5.76
L 27.58	5.50	5.59	L 36.36	3.73	3.86
L 28.76	4.61	4.72	L 37.44	2.75	2.92
L 29.53	4.78	4.88	L 38.10	2.14	2.37
L 31.71	3.73	3.66	L 25.04	2.36	2.56
L 31.79	2.75	2.92	L 25.04	2.75	2.92
L 32.01	2.14	2.37	L 24.93	2.90	3.06
L 19.67	2.42	2.62	L 24.26	3.12	3.27
L 19.46	2.75	2.92	L 21.82	3.37	3.51
L 19.06	2.56	3.13	L 17.06	3.98	4.10
L 10.71	4.07	4.19	L 15.71	5.86	5.95
L 9.11	6.50	6.57	L 13.15	9.29	9.35
L 9.81	7.21	7.27	L 13.15	11.43	11.47
L 8.66	8.32	8.38	L 15.71	HORIZON	HORIZON
L 9.31	10.56	10.61	L 10.71	HORIZON	HORIZON
L 9.60	14.44	14.48	L 9.23	10.56	10.61
L 9.93	20.37	20.40	L 5.00	10.56	10.61

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 10.71	HORIZON	HORIZON	R 0.	10.56	10.61
L 6.37	HORIZON	HORIZON	R 3.72	10.56	10.61
L 5.74	27.53	27.55	R 5.54	10.56	10.61
L 5.71	15.26	15.29	R 5.02	19.74	19.76
L 5.71	10.56	10.61	R 5.95	19.74	19.76
R 0.	10.56	10.61	R 6.27	34.50	34.52
R 5.95	10.56	10.61	R 6.37	HORIZON	HORIZON
R 8.93	10.56	10.61	R 10.73	HORIZON	HORIZON
R 9.29	10.56	10.61	R 9.29	11.43	11.47
R 9.73	14.44	14.48	R 8.04	6.83	6.90
R 10.73	HORIZON	HORIZON	R 8.93	5.67	5.76
R 15.16	HORIZON	HORIZON	R 9.73	4.67	4.77
R 14.29	15.38	15.41	R 10.18	3.86	3.99
R 13.73	11.43	11.47	R 14.29	3.33	3.47
R 13.06	8.56	8.62	R 19.29	2.93	3.10
R 14.29	6.83	6.90	R 21.51	2.75	2.92
R 15.37	5.67	5.76	R 21.84	2.59	2.78
R 16.03	3.87	3.99	R 22.06	2.35	2.56
R 19.29	3.45	3.59	R 24.29	2.29	2.50
R 24.29	3.03	3.19	R 29.29	2.14	2.37
R 27.01	2.75	2.92	R 31.58	2.08	2.31
R 27.47	2.35	2.56	R 31.58	2.75	2.92
R 37.77	2.14	2.37	R 30.12	3.73	3.86
R 37.47	2.75	2.92	R 28.15	5.67	5.76
R 35.95	3.73	3.86	R 25.83	11.43	11.47
R 33.97	5.67	5.76	R 21.84	HORIZON	HORIZON
R 31.84	11.43	11.47	R 30.75	HORIZON	HORIZON
R 27.47	HORIZON	HORIZON	R 33.77	11.43	11.47
R 36.95	HORIZON	HORIZON	R 35.81	5.67	5.76
R 39.29	16.16	16.19	R 37.73	3.73	3.86
R 40.12	11.43	11.47	R 39.29	2.75	2.92
R 42.00	5.67	5.76	R 41.16	2.14	2.37
R 43.77	3.73	3.86	R 44.29	2.04	2.27
R 45.73	2.75	2.92	R 49.29	2.05	2.28
R 47.92	2.14	2.37	R 54.29	2.07	2.29

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRCNT, AIRCRAFT LEVEL

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 44.29	2.04	2.27	R 59.29	2.10	2.32
R 49.29	2.02	2.26	R 64.29	2.14	2.37
R 59.29	2.04	2.27	R 69.29	2.23	2.45
R 79.29	2.22	2.43	R 79.29	2.49	2.68
R 94.29	2.64	2.83	R 84.29	2.68	2.86
R 109.29	3.50	3.64	R 94.29	3.13	3.29
R 124.29	5.86	5.95	R 104.29	3.95	4.08
R 133.69	11.43	11.47	R 114.29	5.67	5.76
R 133.69	15.67	15.70	R 119.29	6.91	6.98
R 133.69	HORIZON	HORIZON	R 119.29	11.43	11.47
			R 119.29	HORIZON	HORIZON
			R 119.29	0.	0.

Table 45. GROUND VISIBILITY PLOT - TABULAR DATA
RF-4C FRONT, 1 DEGREE PITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.34	22.67	22.69	L 133.37	13.26	13.29
L 118.91	10.35	10.40	L 110.96	3.72	3.85
L 118.94	7.46	7.52	L 96.08	2.71	2.89
L 105.94	4.30	4.41	L 81.16	2.20	2.41
L 86.07	2.74	2.91	L 66.16	2.00	2.24
L 66.14	2.10	2.33	L 51.10	1.98	2.22
L 51.09	1.99	2.23	L 48.88	2.02	2.25
L 44.20	1.98	2.22	L 47.26	2.20	2.42
L 41.02	2.07	2.30	L 45.98	2.65	2.83
L 39.42	2.64	2.82	L 42.30	5.27	5.37
L 35.82	5.24	5.33	L 39.68	9.90	9.95
L 33.75	5.79	9.84	L 38.32	14.39	14.43
L 29.98	66.14	66.15	L 36.61	71.37	71.38
L 21.60	61.62	61.63	L 27.27	64.45	64.46
L 23.34	20.98	21.01	L 28.64	22.56	22.58
L 23.82	23.45	26.47	L 29.47	27.00	27.02
L 26.16	5.68	5.73	L 31.93	9.76	9.81
L 28.70	5.65	5.74	L 34.14	5.23	5.32
L 27.67	5.06	5.15	L 36.52	3.53	3.67
L 28.87	4.29	4.41	L 37.67	2.63	2.82
L 29.64	4.44	4.55	L 38.39	2.07	2.30
L 31.86	3.52	3.66	L 25.22	2.26	2.47
L 31.99	2.63	2.81	L 25.20	2.62	2.80
L 32.26	2.06	2.29	L 25.08	2.75	2.93
L 19.81	2.31	2.52	L 24.40	2.95	3.12
L 19.58	2.61	2.80	L 21.93	3.18	3.33
L 19.17	2.81	2.98	L 17.14	3.72	3.85
L 10.76	3.79	3.92	L 15.76	5.32	5.41
L 9.14	5.83	5.91	L 13.18	8.01	8.07
L 9.84	6.40	6.47	L 13.17	9.56	9.61
L 8.68	7.26	7.33	L 15.71	59.51	59.52
L 9.33	8.92	8.97	L 10.71	58.30	58.31
L 9.61	11.55	11.60	L 9.25	8.92	8.97
L 9.94	15.07	15.11	L 5.01	8.91	8.96
L 10.71	58.30	58.31	R 0.	8.90	8.96

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRCNT, 1 DEGREE PITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 6.37	57.64	57.65	R 3.73	8.90	8.96
L 5.74	18.61	18.64	R 5.55	8.91	8.96
L 5.72	12.05	12.09	R 5.03	14.68	14.72
L 5.72	8.91	8.96	R 5.96	14.69	14.72
R 0.	8.90	8.96	R 6.27	21.57	21.60
R 5.96	8.91	8.96	R 6.37	57.64	57.65
R 8.95	8.92	8.97	R 10.73	58.31	58.32
R 9.31	8.92	8.97	R 9.31	9.53	9.59
R 9.74	11.56	11.60	R 8.06	6.09	6.17
R 10.73	58.31	58.32	R 8.96	5.15	5.25
R 15.16	59.36	59.36	R 9.77	4.30	4.42
R 14.31	12.19	12.23	R 10.23	3.61	3.74
R 13.75	9.56	9.61	R 14.37	3.13	3.29
R 13.09	7.46	7.53	R 19.41	2.78	2.95
R 14.33	6.11	6.19	R 21.65	2.61	2.80
R 15.42	5.16	5.26	R 21.99	2.47	2.67
R 16.10	3.61	3.75	R 22.22	2.25	2.46
R 19.39	3.25	3.40	R 24.47	2.20	2.41
R 24.43	2.87	3.04	R 29.52	2.06	2.29
R 27.18	2.62	2.80	R 31.84	2.00	2.24
R 27.67	2.25	2.47	R 31.78	2.63	2.81
R 38.06	2.07	2.30	R 30.26	3.52	3.66
R 37.70	2.63	2.82	R 28.24	5.20	5.30
R 36.11	3.53	3.67	R 25.87	9.68	9.73
R 34.07	5.23	5.32	R 21.84	61.72	61.73
R 31.89	5.76	5.81	R 30.75	66.66	66.67
R 27.47	64.57	64.58	R 33.82	9.79	9.84
R 36.95	71.69	71.70	R 35.92	5.24	5.33
R 39.33	13.26	13.29	R 37.90	3.54	3.67
R 40.18	9.91	9.96	R 39.53	2.64	2.82
R 42.12	5.27	5.36	R 41.47	2.07	2.30
R 43.96	3.55	3.69	R 44.64	1.97	2.21
R 46.00	2.65	2.83	R 49.67	1.99	2.23
R 48.27	2.08	2.31	R 54.69	2.01	2.25
R 44.64	1.97	2.21	R 59.71	2.05	2.28

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRCNT, 1 DEGREE PITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 49.67	1.97	2.20	R 64.72	2.10	2.33
R 59.72	1.99	2.23	R 69.71	2.20	2.42
R 79.74	2.20	2.41	R 79.69	2.47	2.66
R 94.67	2.65	2.84	R 84.66	2.67	2.85
R 109.56	3.57	3.71	R 94.61	3.15	3.30
R 124.43	6.23	6.31	R 104.53	4.02	4.15
R 133.75	13.27	13.31	R 114.45	5.92	6.00
R 133.72	25.81	25.83	R 119.41	7.36	7.42

Table 46. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 2 DEGREES FITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.38	27.93	27.95	L 133.42	15.78	15.81
L 118.99	11.35	11.40	L 111.21	3.81	3.94
L 119.05	7.97	8.03	L 96.44	2.73	2.90
L 106.16	4.39	4.51	L 81.61	2.18	2.40
L 86.44	2.73	2.90	L 66.62	1.97	2.21
L 66.58	2.07	2.30	L 51.49	1.93	2.18
L 51.49	1.94	2.18	L 49.26	1.96	2.20
L 44.55	1.92	2.16	L 47.60	2.13	2.36
L 41.34	2.00	2.24	L 46.25	2.55	2.74
L 39.66	2.53	2.72	L 42.44	4.92	5.02
L 35.93	4.86	4.96	L 39.75	8.72	8.78
L 33.81	8.56	8.62	L 38.37	12.01	12.05
L 30.00	33.06	33.08	L 36.63	35.68	35.70
L 21.61	30.80	30.82	L 27.93	89.93	89.93
L 23.36	15.69	15.72	L 27.28	32.22	32.24
L 23.84	18.59	18.61	L 28.66	16.76	16.79
L 26.21	8.39	8.45	L 29.50	19.14	19.16
L 28.79	5.18	5.28	L 31.99	8.51	8.57
L 27.76	4.68	4.78	L 34.25	4.85	4.95
L 28.98	4.02	4.14	L 36.70	3.35	3.50
L 29.75	4.15	4.26	L 37.90	2.53	2.72
L 32.01	3.33	3.48	L 38.70	2.00	2.23
L 32.19	2.51	2.70	L 25.42	2.17	2.39
L 32.53	1.99	2.23	L 25.37	2.50	2.69
L 19.96	2.21	2.43	L 25.24	2.63	2.81
L 19.72	2.49	2.68	L 24.54	2.81	2.98
L 19.29	2.67	2.85	L 22.06	3.01	3.17
L 10.81	3.54	3.68	L 17.22	3.48	3.63
L 9.16	5.28	5.37	L 15.81	4.87	4.97
L 9.86	5.75	5.83	L 13.21	7.04	7.11
L 8.70	6.44	6.52	L 13.20	8.21	8.27
L 9.35	7.72	7.78	L 15.72	29.75	29.76
L 9.63	9.62	9.68	L 10.72	29.14	29.16
L 9.95	11.96	12.00	L 9.27	7.72	7.78
L 10.72	29.14	29.16	L 5.02	7.70	7.76

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GROUND VISIBILITY PLOT - TABLLAR DATA

RF-4C FRNT, 2 DEGREES FITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 6.37	28.81	28.83	R 0.	7.69	7.75
L 5.75	14.05	14.09	R 3.73	7.69	7.76
L 5.73	9.55	10.00	R 5.56	7.70	7.76
L 5.73	7.70	7.76	R 5.03	11.68	11.72
R 0.	7.69	7.75	R 5.96	11.69	11.73
R 5.97	7.70	7.76	R 6.28	15.68	15.72
R 8.96	7.71	7.78	R 6.37	28.81	28.83
R 9.33	7.72	7.78	R 6.47	79.88	79.88
R 9.76	9.63	9.68	R 5.54	98.67	98.67
R 10.74	29.15	29.16	R 11.40	HORIZON*	HORIZON*
R 10.83	58.04	58.04	R 10.75	97.95	97.96
R 17.43	HORIZON*	HORIZON*	R 10.74	29.15	29.16
R 16.73	107.01	107.02	R 9.32	8.17	8.24
R 15.26	104.26	104.27	R 8.09	5.50	5.59
R 15.17	29.67	29.69	R 8.99	4.71	4.82
R 14.33	10.09	10.14	R 9.81	3.99	4.11
R 13.78	8.21	8.27	R 10.28	3.38	3.52
R 13.12	6.60	6.68	R 14.45	2.96	3.12
R 14.37	5.52	5.61	R 19.53	2.64	2.82
R 15.47	4.73	4.84	R 21.79	2.49	2.68
R 16.18	3.39	3.54	R 22.14	2.36	2.57
R 19.49	3.07	3.23	R 22.40	2.16	2.38
R 24.58	2.73	2.91	R 24.67	2.11	2.33
R 27.36	2.50	2.69	R 29.77	1.98	2.22
R 27.88	2.16	2.38	R 32.11	1.93	2.17
R 38.37	2.00	2.23	R 31.98	2.51	2.70
R 37.93	2.53	2.72	R 30.41	3.33	3.47
R 36.28	3.35	3.50	R 28.33	4.80	4.90
R 34.18	4.85	4.95	R 25.92	8.39	8.45
R 31.95	8.51	8.57	R 21.85	30.85	30.87
R 27.48	32.28	32.29	R 30.77	33.33	33.34
R 36.97	35.84	35.85	R 33.88	8.56	8.62
R 39.39	11.23	11.28	R 36.03	4.86	4.96
R 40.25	8.74	8.79	R 38.08	3.36	3.50
R 42.25	4.92	5.02	R 39.77	2.53	2.72

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-40 FRCNT, 2 DEGREES FITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 44.16	3.39	3.53	R 41.80	2.00	2.24
R 46.27	2.55	2.74	R 45.00	1.91	2.16
R 48.64	2.02	2.25	R 50.05	1.94	2.18
R 45.00	1.91	2.16	R 55.10	1.96	2.20
R 50.07	1.91	2.16	R 60.13	2.00	2.24
R 60.16	1.65	2.19	R 65.15	2.06	2.29
R 80.19	2.18	2.40	R 70.14	2.16	2.38
R 95.04	2.67	2.85	R 80.09	2.44	2.64
R 109.82	3.66	3.79	R 85.04	2.66	2.84
R 124.55	6.65	6.73	R 94.92	3.16	3.32
R 133.80	15.82	15.85	R 104.77	4.10	4.22
R 133.75	27.49	27.51	R 114.60	6.19	6.27

Table 47. GROUND VISIBILITY PLOT - TABULAR DATA
RF-4C FRONT, 3 DEGREES PITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.41	36.37	36.38	L 133.46	19.48	19.50
L 119.06	12.57	12.61	L 111.45	3.92	4.04
L 119.16	8.56	8.61	L 96.81	2.74	2.92
L 106.37	4.49	4.60	L 82.06	2.17	2.39
L 86.81	2.72	2.90	L 67.09	1.94	2.18
L 67.03	2.03	2.26	L 51.91	1.88	2.13
L 51.90	1.88	2.13	L 49.65	1.91	2.16
L 44.93	1.86	2.11	L 47.95	2.07	2.30
L 41.68	1.94	2.18	L 46.54	2.46	2.66
L 39.92	2.44	2.63	L 42.58	4.62	4.72
L 36.06	4.54	4.64	L 39.83	7.80	7.86
L 33.88	7.60	7.67	L 38.42	10.30	10.35
L 30.01	22.04	22.06	L 36.65	23.78	23.80
L 19.51	HORIZON*	HORIZON*	L 27.93	37.67	37.68
L 21.63	20.53	20.55	L 27.30	21.47	21.50
L 23.39	12.53	12.57	L 28.69	13.32	13.36
L 23.87	14.32	14.36	L 29.53	14.81	14.85
L 26.27	7.40	7.47	L 32.05	7.55	7.61
L 28.89	4.79	4.89	L 34.38	4.52	4.63
L 27.87	4.35	4.46	L 36.88	3.19	3.34
L 29.11	3.77	3.90	L 38.15	2.43	2.63
L 29.88	3.89	4.01	L 39.02	1.93	2.18
L 32.17	3.16	3.32	L 25.62	2.08	2.31
L 32.41	2.41	2.61	L 25.54	2.39	2.59
L 32.80	1.92	2.16	L 25.40	2.50	2.70
L 20.12	2.12	2.34	L 24.69	2.67	2.85
L 19.86	2.38	2.58	L 22.18	2.85	3.02
L 19.42	2.54	2.73	L 17.31	3.28	3.43
L 10.86	2.32	3.47	L 15.87	4.48	4.60
L 9.20	4.82	4.93	L 13.24	6.27	6.35
L 9.89	5.21	5.31	L 13.23	7.19	7.26
L 8.73	5.78	5.86	L 15.73	19.82	19.85
L 9.37	6.80	6.87	L 10.72	19.42	19.45
L 9.65	8.24	8.30	L 9.29	6.79	6.87
L 9.97	9.90	9.95	L 5.03	6.77	6.85

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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.....CONTINUED

GROUND VISIBILITY PLOT - TABULAR DATA

RF-40 FRCNT, 3 DEGREES PITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 10.72	19.42	19.45	R 0.	6.76	6.84
L 6.14	HORIZON*	HORIZON*	R 3.74	6.77	6.84
L 6.38	19.20	19.23	R 5.58	6.77	6.85
L 5.76	11.28	11.33	R 5.04	9.69	9.75
L 5.74	8.47	8.53	R 5.97	9.70	9.75
L 5.75	6.78	6.85	R 6.29	12.31	12.36
R 0.	6.76	6.84	R 6.38	19.20	19.23
R 5.99	6.78	6.85	R 6.47	33.48	33.49
R 8.99	6.79	6.87	R 5.54	36.35	36.36
R 9.35	6.80	6.87	R 5.14	66.01	66.01
R 9.78	8.24	8.30	R 11.61	HORIZON*	HORIZON*
R 10.74	19.42	19.45	R 11.40	46.17	46.18
R 10.83	36.56	36.58	R 10.75	36.55	36.56
R 17.70	95.81	95.81	R 10.74	19.42	19.45
R 17.44	43.99	44.00	R 9.35	7.15	7.22
R 16.73	38.36	38.38	R 8.11	5.00	5.10
R 15.26	37.83	37.84	R 9.03	4.34	4.46
R 15.18	19.77	19.80	R 9.85	3.72	3.85
R 14.36	8.61	8.66	R 10.33	3.18	3.33
R 13.81	7.19	7.26	R 14.54	2.80	2.97
R 13.16	5.92	6.01	R 19.66	2.52	2.71
R 14.42	5.03	5.13	R 21.95	2.38	2.58
R 15.53	4.37	4.48	R 22.31	2.26	2.47
R 16.27	3.19	3.35	R 22.58	2.07	2.30
R 19.61	2.91	3.07	R 24.87	2.02	2.26
R 24.73	2.60	2.79	R 30.02	1.91	2.16
R 27.55	2.39	2.59	R 32.39	1.86	2.11
R 28.10	2.08	2.31	R 32.20	2.41	2.61
R 38.68	1.93	2.18	R 30.56	3.15	3.31
R 38.18	2.43	2.63	R 28.43	4.46	4.57
R 36.47	3.19	3.34	R 25.98	7.40	7.46
R 34.30	4.52	4.63	R 21.87	20.56	20.58
R 32.01	7.55	7.61	R 30.78	22.21	22.23
R 27.50	21.51	21.53	R 33.95	7.60	7.67
R 36.99	23.89	23.91	R 36.16	4.54	4.65

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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.....CONTINUED

GROUND VISIBILITY PLOT - TABULAR DATA

RF-40 FRONT, 3 DEGREES PITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 39.45	9.74	9.79	R 38.27	3.20	3.35
R 40.33	7.82	7.88	R 40.03	2.44	2.63
R 42.40	4.62	4.72	R 42.14	1.94	2.18
R 44.37	3.24	3.39	R 45.38	1.86	2.11
R 46.56	2.46	2.66	R 50.46	1.89	2.14
R 49.02	1.96	2.20	R 55.52	1.92	2.16
R 45.38	1.86	2.11	R 60.57	1.96	2.20
R 50.47	1.86	2.11	R 65.59	2.02	2.26
R 60.61	1.91	2.15	R 70.58	2.13	2.35
R 80.64	2.16	2.38	R 80.49	2.42	2.62
R 95.41	2.68	2.86	R 85.41	2.64	2.83
R 110.07	3.74	3.88	R 95.24	3.18	3.34
R 124.67	7.13	7.20	R 105.00	4.18	4.30
R 133.84	19.57	19.60	R 114.74	6.49	6.57
R 133.76	68.52	68.53	R 119.63	8.44	8.50

Table 48. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 5 DEGREES FITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.44	91.96	91.96	L 133.52	36.66	36.67
L 119.19	16.01	16.04	L 111.91	4.14	4.26
L 119.35	10.04	10.05	L 57.53	2.78	2.95
L 106.79	4.72	4.82	L 82.98	2.14	2.36
L 87.54	2.70	2.88	L 68.06	1.88	2.13
L 67.95	1.96	2.20	L 52.77	1.79	2.05
L 52.76	1.79	2.05	L 50.47	1.81	2.07
L 45.71	1.76	2.02	L 48.69	1.95	2.19
L 42.39	1.82	2.08	L 47.15	2.30	2.51
L 40.47	2.26	2.47	L 42.89	4.11	4.23
L 36.34	4.00	4.12	L 40.01	6.43	6.51
L 34.05	6.21	6.29	L 38.56	8.02	8.08
L 30.07	13.21	13.25	L 36.71	14.26	14.29
L 28.59	36.25	36.26	L 35.29	53.01	53.02
L 19.52	30.10	30.11	L 26.43	34.76	34.78
L 21.67	12.30	12.34	L 27.97	17.41	17.44
L 23.46	8.91	8.97	L 27.36	12.87	12.91
L 23.94	9.81	9.86	L 28.78	9.44	9.49
L 26.40	5.58	6.07	L 29.61	10.20	10.24
L 29.10	4.15	4.27	L 32.21	6.15	6.23
L 28.10	3.80	3.93	L 34.64	3.97	4.10
L 29.38	3.35	3.50	L 37.28	2.90	3.07
L 30.15	3.45	3.59	L 38.68	2.25	2.46
L 32.53	2.86	3.03	L 39.70	1.81	2.07
L 32.88	2.22	2.44	L 26.06	1.92	2.17
L 33.39	1.79	2.05	L 25.92	2.19	2.41
L 20.46	1.95	2.19	L 25.77	2.29	2.50
L 20.16	2.17	2.39	L 25.02	2.43	2.63
L 19.70	2.31	2.52	L 22.46	2.58	2.77
L 10.98	2.95	3.12	L 17.50	2.92	3.09
L 9.27	4.11	4.23	L 16.00	3.87	4.00
L 9.97	4.39	4.50	L 13.32	5.14	5.24
L 8.78	4.79	4.89	L 13.30	5.75	5.83
L 9.42	5.48	5.57	L 15.77	11.88	11.92
L 9.69	6.39	6.47	L 15.70	31.58	31.60

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 5 DEGREES PITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 10.01	7.36	7.43	L 10.70	29.94	29.95
L 10.75	11.63	11.68	L 10.75	11.63	11.68
L 10.70	29.94	29.95	L 9.34	5.48	5.57
L 6.15	28.62	28.63	L 5.06	5.45	5.54
L 6.39	11.50	11.54	R 0.	5.44	5.53
L 5.78	8.08	8.14	R 3.77	5.45	5.54
L 5.76	6.52	6.59	R 5.61	5.45	5.55
L 5.78	5.46	5.55	R 5.06	7.22	7.29
R 0.	5.44	5.53	R 6.00	7.23	7.30
R 6.02	5.46	5.55	R 6.31	8.60	8.66
R 9.04	5.48	5.57	R 6.39	11.50	11.54
R 9.40	5.48	5.57	R 6.48	15.47	15.50
R 9.83	6.39	6.47	R 5.55	16.04	16.07
R 10.77	11.63	11.68	R 5.14	20.02	20.04
R 10.85	16.21	16.24	R 11.62	23.02	23.04
R 10.73	41.74	41.75	R 11.41	17.88	17.91
R 17.83	32.55	32.56	R 10.77	16.20	16.23
R 17.71	22.87	22.89	R 10.77	11.63	11.68
R 17.46	17.83	17.86	R 9.40	5.71	5.80
R 16.76	16.79	16.82	R 8.17	4.24	4.35
R 15.28	16.62	16.65	R 9.10	3.75	3.88
R 15.22	11.84	11.89	R 9.95	3.27	3.42
R 14.42	6.64	6.71	R 10.45	2.83	3.01
R 13.89	5.76	5.84	R 14.73	2.53	2.72
R 13.24	4.90	5.00	R 19.94	2.29	2.50
R 14.53	4.27	4.39	R 22.28	2.18	2.40
R 15.66	3.78	3.91	R 22.66	2.08	2.31
R 16.46	2.85	3.02	R 22.97	1.91	2.15
R 19.85	2.62	2.81	R 25.31	1.87	2.12
R 25.07	2.38	2.58	R 30.57	1.78	2.04
R 27.95	2.20	2.42	R 32.99	1.74	2.01
R 28.58	1.92	2.17	R 32.66	2.22	2.44
R 39.36	1.81	2.07	R 30.90	2.85	3.02
R 38.72	2.25	2.46	R 28.66	3.89	4.02
R 36.86	2.90	3.07	R 26.11	5.98	6.06

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, 5 DEGREES PITCH DOWN

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 34.57	3.97	4.09	R 21.92	12.32	12.36
R 32.17	6.15	6.23	R 18.72	33.00	33.02
R 27.56	12.89	12.93	R 28.80	41.46	41.47
R 24.60	37.05	37.06	R 30.85	13.31	13.35
R 35.23	52.86	52.87	R 34.12	6.21	6.29
R 37.05	14.32	14.36	R 26.44	4.00	4.12
R 39.59	7.70	7.76	R 38.67	2.91	3.08
R 40.51	6.45	6.53	R 40.58	2.26	2.47
R 42.71	4.10	4.22	R 42.86	1.82	2.08
R 44.82	2.97	3.14	R 46.17	1.75	2.02
R 47.17	2.30	2.51	R 51.30	1.79	2.05
R 49.81	1.86	2.11	R 56.41	1.83	2.08
R 46.17	1.75	2.02	R 61.48	1.88	2.13
R 51.33	1.77	2.03	R 66.51	1.95	2.20
R 61.54	1.83	2.09	R 71.48	2.07	2.30
R 81.56	2.13	2.36	R 81.31	2.39	2.59
R 96.15	2.71	2.89	R 86.17	2.62	2.81
R 110.56	3.94	4.06	R 95.86	3.22	3.37
R 124.89	8.34	8.40	R 105.46	4.36	4.47
R 133.90	37.23	37.24	R 115.01	7.19	7.26

Table 49. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRCNT, ROLL 5 DEGREES LEFT

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.27	40.81	40.82	L 133.24	89.32	89.32
L 118.39	12.99	13.03	L 133.42	15.74	15.77
L 118.52	7.70	7.76	L 133.72	6.59	6.67
L 119.17	5.46	5.55	L 111.28	2.74	2.91
L 119.26	4.51	4.62	L 95.92	2.11	2.34
L 106.10	3.04	3.20	L 80.29	1.79	2.05
L 85.55	2.14	2.37	L 64.57	1.69	1.96
L 64.63	1.76	2.03	L 48.99	1.74	2.06
L 49.00	1.74	2.01	L 46.75	1.78	2.04
L 41.92	1.77	2.03	L 45.27	1.93	2.18
L 38.78	1.86	2.12	L 44.30	2.29	2.50
L 37.63	2.34	2.55	L 41.41	4.22	4.34
L 34.88	4.37	4.48	L 39.17	6.96	7.03
L 33.23	7.34	7.41	L 37.95	9.09	9.14
L 29.89	22.94	22.96	L 36.51	19.21	19.24
L 21.53	31.15	31.17	L 27.93	47.23	47.24
L 23.10	15.13	15.16	L 27.18	25.02	25.04
L 23.63	17.54	17.57	L 28.40	14.13	14.17
L 25.64	7.93	8.00	L 29.27	15.45	15.48
L 27.82	4.90	5.00	L 31.41	7.47	7.54
L 26.68	4.48	4.59	L 33.20	4.41	4.52
L 27.71	3.84	3.97	L 35.16	3.09	3.25
L 28.52	3.94	4.06	L 35.86	2.36	2.56
L 30.46	3.15	3.31	L 36.11	1.88	2.13
L 30.12	2.40	2.60	L 23.01	2.15	2.37
L 29.89	1.91	2.16	L 23.29	2.47	2.66
L 17.63	2.24	2.45	L 23.26	2.59	2.78
L 17.66	2.53	2.72	L 22.70	2.78	2.95
L 17.38	2.71	2.89	L 20.35	3.02	3.18
L 9.46	3.82	3.95	L 15.79	3.60	3.74
L 8.32	5.97	6.05	L 14.83	5.14	5.24
L 9.09	6.52	6.59	L 12.58	7.86	7.92
L 8.03	7.52	7.58	L 12.68	9.33	9.38
L 8.81	9.21	9.26	L 15.65	42.36	42.37
L 9.22	11.96	12.00	L 10.67	61.73	61.74

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, ROLL 5 DEGREES LEFT

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 9.65	15.63	15.66	L 8.73	9.22	9.27
L 10.67	61.73	61.74	L 4.51	9.80	9.85
L 6.35	103.41	103.41	R 0.47	10.60	10.65
L 5.54	22.26	22.29	R 4.18	11.28	11.32
L 5.36	13.51	13.55	R 5.99	11.65	11.69
L 5.22	9.70	9.75	R 5.25	23.35	23.37
R 0.47	10.60	10.65	R 6.18	24.15	24.17
R 6.40	11.73	11.77	R 6.39	51.69	51.70
R 9.36	12.39	12.43	R 9.69	13.70	13.73
R 9.72	12.47	12.51	R 8.73	7.49	7.56
R 10.03	18.46	18.48	R 9.76	6.18	6.26
R 14.55	23.14	23.17	R 10.74	5.05	5.15
R 14.10	15.07	15.10	R 11.41	4.14	4.26
R 13.58	10.37	10.42	R 15.68	3.62	3.76
R 14.94	8.06	8.13	R 20.82	3.24	3.40
R 16.16	6.58	6.66	R 23.11	3.06	3.22
R 17.21	4.31	4.42	R 23.53	2.88	3.05
R 20.58	3.88	4.01	R 23.93	2.59	2.78
R 25.69	3.45	3.59	R 26.17	2.55	2.74
P 28.52	3.14	3.29	R 31.19	2.42	2.61
R 29.23	2.65	2.83	R 33.49	2.36	2.56
R 39.46	2.49	2.68	R 33.01	3.20	3.36
R 38.78	3.29	3.44	R 31.17	4.53	4.64
R 36.92	4.59	4.80	R 28.83	7.48	7.55
R 34.59	7.93	8.00	R 26.14	20.38	20.41
R 32.11	24.36	24.38	R 34.03	25.91	25.93
R 39.42	HORIZON*	HORIZON*	R 36.42	8.08	8.14
R 40.35	32.37	32.39	R 38.67	4.74	4.85
R 42.54	8.59	8.65	R 40.57	3.31	3.46
R 44.62	4.91	5.01	R 42.76	2.52	2.71
R 46.87	3.40	3.54	R 45.89	2.40	2.50
R 49.33	2.57	2.76	R 50.73	2.46	2.65
R 45.89	2.40	2.60	R 55.56	2.51	2.70
R 50.75	2.42	2.61	R 60.37	2.58	2.77
R 60.41	2.50	2.69	R 65.18	2.68	2.86

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, ROLL 5 DEGREES LEFT

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 79.66	2.84	3.01	R 69.98	2.84	3.01
R 94.17	3.55	3.69	R 79.61	3.28	3.42
R 108.89	5.03	5.13	R 84.45	3.61	3.75
R 123.92	10.31	10.36	R 94.19	4.44	4.55
R 133.50	41.58	41.59	R 104.03	6.07	6.15

Table 50. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, ROLL 10 DEGREES LEFT

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 118.17	20.33	20.36	L 133.03	44.00	44.01
L 118.42	9.84	9.89	L 133.39	13.36	13.40
L 118.67	6.46	6.54	L 133.75	7.85	7.91
L 118.92	4.79	4.90	L 134.36	4.62	4.72
L 119.72	3.80	3.93	L 112.04	2.17	2.39
L 119.91	3.30	3.45	L 96.20	1.71	1.98
L 106.63	2.36	2.56	L 79.76	1.47	1.78
L 85.35	1.73	2.00	L 63.15	1.42	1.74
L 63.27	1.48	1.79	L 46.92	1.50	1.80
L 46.92	1.50	1.81	L 44.64	1.54	1.84
L 39.63	1.55	1.85	L 43.28	1.67	1.95
L 36.52	1.65	1.93	L 42.58	1.96	2.20
L 35.79	2.04	2.27	L 40.40	3.35	3.50
L 33.83	3.55	3.69	L 38.50	5.00	5.10
L 32.56	5.41	5.50	L 37.41	6.08	6.16
L 29.60	11.48	11.52	L 36.19	9.60	9.66
L 28.68	28.72	28.74	L 35.35	20.48	20.51
L 19.72	103.07	103.08	L 26.54	34.91	34.93
L 21.30	15.61	15.64	L 27.74	16.12	16.15
L 22.71	9.97	10.02	L 26.91	12.53	12.57
L 23.29	10.87	10.92	L 28.00	8.90	8.95
L 24.98	6.09	6.17	L 28.90	9.30	9.36
L 25.82	4.06	4.19	L 30.74	5.55	5.64
L 25.59	3.79	3.92	L 32.14	3.61	3.75
L 26.45	3.30	3.44	L 33.71	2.64	2.82
L 27.30	3.36	3.50	L 34.00	2.06	2.29
L 28.98	2.74	2.91	L 33.79	1.67	1.95
L 28.19	2.14	2.36	L 20.75	1.98	2.21
L 27.48	1.73	2.00	L 21.32	2.25	2.46
L 15.42	2.10	2.32	L 21.39	2.36	2.56
L 15.69	2.35	2.56	L 20.94	2.52	2.71
L 15.55	2.52	2.71	L 18.71	2.74	2.92
L 8.13	3.62	3.75	L 14.39	3.31	3.46
L 7.45	5.56	5.65	L 13.83	4.61	4.72
L 8.30	5.99	6.07	L 11.91	6.84	6.91

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, ROLL 10 DEGREES LEFT

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 7.34	6.90	6.97	L 12.11	7.92	7.99
L 8.24	8.22	8.28	L 15.48	21.24	21.27
L 8.78	10.27	10.32	L 10.55	30.97	30.99
L 9.30	12.75	12.79	L 8.16	8.23	8.29
L 10.55	30.97	30.99	L 3.98	9.21	9.27
L 6.27	51.89	51.90	R 0.94	10.72	10.77
L 5.29	18.81	18.83	R 4.60	12.21	12.25
L 4.97	12.21	12.25	R 6.39	13.09	13.13
L 4.68	9.03	9.09	R 5.45	28.84	28.86
R 0.94	10.72	10.77	R 6.36	31.38	31.40
R 6.80	13.31	13.34	R 6.46	104.47	104.48
R 9.73	15.11	15.15	R 10.01	17.24	17.27
R 10.08	15.36	15.40	R 9.36	8.37	8.43
R 10.26	25.80	25.82	R 10.52	6.85	6.92
R 14.71	47.33	47.34	R 11.67	5.54	5.63
R 14.37	22.31	22.33	R 12.54	4.50	4.61
R 14.00	13.25	13.29	R 16.95	4.00	4.12
R 15.49	9.92	9.97	R 22.17	3.66	3.79
R 16.83	7.89	7.96	R 24.52	3.47	3.61
R 18.25	4.89	5.00	R 25.02	3.25	3.40
R 21.70	4.46	4.57	R 25.58	2.91	3.07
R 26.90	4.03	4.15	R 27.81	2.88	3.04
R 29.81	3.67	3.81	R 32.83	2.77	2.95
R 30.76	3.05	3.21	R 35.12	2.72	2.90
R 40.88	2.96	3.13	R 34.20	3.85	3.98
R 39.84	4.09	4.21	R 32.01	5.77	5.86
R 37.66	6.31	6.39	R 29.32	11.02	11.07
R 35.01	13.21	13.25	R 26.27	95.59	95.60
R 42.86	17.64	17.67	R 36.81	14.06	14.09
R 45.22	7.13	7.20	R 39.38	6.49	6.57
R 47.75	4.43	4.54	R 41.59	4.16	4.28
R 50.46	3.19	3.34	R 44.08	3.04	3.20
R 47.20	2.91	3.07	R 47.20	2.91	3.07
R 51.92	2.98	3.14	R 51.88	3.03	3.19
R 61.28	3.18	3.33	R 56.55	3.16	3.31

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, ROLL 10 DEGREES LEFT

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 79.93	3.88	4.01	R 61.21	3.31	3.46
R 94.08	5.27	5.37	R 65.87	3.50	3.64
R 108.64	8.78	8.83	R 70.50	3.81	3.94
R 123.75	41.37	41.38	R 79.84	4.68	4.79

Table 51. GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, ROLL 15 DEGREES LEFT

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 117.64	45.28	45.29	L 132.68	28.63	28.65
L 118.00	13.48	13.52	L 133.22	11.54	11.58
L 118.38	7.89	7.96	L 133.75	7.20	7.27
L 118.75	5.56	5.65	L 134.30	5.21	5.31
L 119.14	4.27	4.39	L 135.24	3.54	3.68
L 119.53	3.45	3.59	L 113.02	1.78	2.04
L 120.48	2.89	3.06	L 96.56	1.41	1.73
L 120.78	2.58	2.77	L 79.08	1.23	1.59
L 107.32	1.90	2.15	L 61.37	1.21	1.57
L 85.08	1.43	1.74	L 44.43	1.32	1.65
L 61.57	1.26	1.61	L 42.13	1.36	1.69
L 44.44	1.32	1.65	L 40.91	1.47	1.78
L 36.95	1.38	1.71	L 40.54	1.71	1.98
L 33.90	1.47	1.78	L 39.13	2.78	2.95
L 33.65	1.81	2.07	L 37.61	3.90	4.02
L 32.54	3.00	3.16	L 36.65	4.57	4.68
L 31.67	4.28	4.40	L 35.66	6.40	6.48
L 29.13	7.67	7.73	L 35.05	10.06	10.11
L 28.44	13.04	13.08	L 33.71	24.74	24.76
L 27.34	63.53	63.54	L 26.33	14.79	14.82
L 19.60	25.58	25.60	L 27.38	9.74	9.79
L 20.93	10.45	10.49	L 26.47	8.37	8.43
L 22.17	7.46	7.52	L 27.41	6.51	6.58
L 22.78	7.90	7.97	L 28.33	6.67	6.74
L 24.15	4.96	5.06	L 29.86	4.43	4.54
L 25.62	3.48	3.62	L 30.86	3.06	3.22
L 24.30	3.29	3.44	L 32.00	2.30	2.51
L 24.99	2.90	3.06	L 31.84	1.84	2.09
L 25.87	2.93	3.10	L 31.13	1.51	1.81
L 27.26	2.42	2.62	L 18.28	1.84	2.09
L 26.00	1.94	2.18	L 19.15	2.08	2.31
L 24.77	1.59	1.88	L 19.31	2.17	2.39
L 13.05	1.99	2.22	L 18.99	2.32	2.52
L 13.57	2.21	2.43	L 16.91	2.53	2.72
L 13.57	2.37	2.57	L 12.87	3.08	3.24

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, ROLL 15 DEGREES LEFT

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 6.73	3.47	3.61	L 12.73	4.20	4.32
L 6.53	5.24	5.33	L 11.15	6.10	6.18
L 7.44	5.58	5.67	L 11.44	6.93	7.00
L 6.60	6.42	6.50	L 15.20	14.23	14.27
L 7.60	7.47	7.53	L 15.95	51.45	51.46
L 8.26	9.05	9.11	L 10.35	20.77	20.79
L 8.88	10.83	10.88	L 7.53	7.49	7.55
L 10.35	20.77	20.79	L 3.43	8.75	8.81
L 6.15	34.81	34.82	R 1.40	10.93	10.98
L 5.01	16.38	16.41	R 4.99	13.41	13.45
L 4.55	11.21	11.25	R 6.75	15.07	15.11
L 4.12	8.51	8.57	R 5.60	38.08	38.09
R 1.40	10.93	10.98	R 6.50	45.29	45.30
R 7.14	15.50	15.54	R 10.26	23.47	23.49
R 10.01	19.55	19.58	R 9.91	9.55	9.60
R 10.36	20.19	20.21	R 11.20	7.74	7.80
R 10.42	43.33	43.35	R 12.51	6.19	6.27
R 14.54	43.48	43.50	R 13.58	4.96	5.06
R 14.31	18.51	18.54	R 18.07	4.50	4.61
R 15.91	12.99	13.03	R 23.35	4.21	4.33
R 17.37	9.93	9.98	R 25.73	4.02	4.15
R 19.15	5.70	5.79	R 26.31	3.75	3.88
R 22.66	5.27	5.36	R 27.03	3.32	3.47
R 27.91	4.85	4.96	R 29.24	3.32	3.46
R 30.88	4.43	4.55	R 34.22	3.26	3.41
R 32.05	3.59	3.73	R 36.49	3.22	3.38
R 42.02	3.64	3.78	R 35.16	4.82	4.93
R 40.66	5.39	5.48	R 32.64	7.97	8.03
R 38.17	9.63	9.69	R 29.62	21.04	21.06
R 35.22	39.49	39.51	R 36.99	53.76	53.77
R 45.61	12.94	12.98	R 39.86	10.26	10.31
R 48.39	6.32	6.40	R 42.37	5.58	5.67
R 51.34	4.15	4.27	R 45.13	3.81	3.94
R 48.23	3.66	3.79	R 48.23	3.66	3.79
R 52.83	3.83	3.96	R 52.77	3.93	4.05

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, ROLL 15 DEGREES LEFT

LEFT EYE

RIGHT EYE

HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
R 61.93	4.31	4.42	R 57.31	4.20	4.32
R 80.11	5.96	6.05	R 61.84	4.55	4.65
R 94.03	9.93	9.98	R 66.36	4.98	5.08
R 108.53	32.53	32.55	R 70.87	5.68	5.77

Table 52. GROUND VISIBILITY PLOT - TABULAR DATA

RF-40 FRONT, ROLL 30 DEGREES LEFT

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 117.87	4.87	4.97	L 131.91	7.79	7.86
L 118.62	3.86	3.99	L 132.97	5.60	5.69
L 119.39	3.19	3.34	L 134.04	4.35	4.47
L 120.18	2.70	2.88	L 135.14	3.55	3.68
L 121.01	2.33	2.54	L 136.26	2.98	3.14
L 121.87	2.04	2.27	L 137.43	2.56	2.75
L 122.78	1.80	2.06	L 139.47	2.05	2.28
L 124.32	1.62	1.90	L 117.74	1.07	1.47
L 125.04	1.49	1.80	L 98.37	0.83	1.30
L 110.75	1.11	1.49	L 75.60	0.73	1.24
L 83.74	0.84	1.31	L 52.93	0.77	1.26
L 53.51	0.80	1.28	L 33.89	0.94	1.37
L 33.91	0.94	1.37	L 31.66	0.98	1.40
L 26.21	1.04	1.44	L 31.14	1.07	1.46
L 23.63	1.13	1.51	L 32.09	1.22	1.58
L 25.22	1.36	1.69	L 33.65	1.82	2.08
L 27.20	2.05	2.28	L 33.43	2.34	2.54
L 27.70	2.66	2.84	L 32.94	2.61	2.80
L 26.55	3.88	4.00	L 32.76	3.20	3.35
L 26.59	4.98	5.08	L 32.87	3.98	4.11
L 26.33	7.39	7.46	L 32.29	5.38	5.48
L 16.42	20.00	20.03	L 21.64	10.90	10.95
L 18.43	7.97	8.03	L 24.63	5.47	5.56
L 18.93	5.34	5.43	L 25.19	4.50	4.61
L 19.60	4.33	4.44	L 24.06	4.25	4.36
L 20.32	4.42	4.53	L 24.52	3.65	3.78
L 20.60	3.24	3.39	L 25.48	3.64	3.78
L 20.84	2.48	2.67	L 25.97	2.78	2.95
L 19.28	2.41	2.61	L 25.58	2.12	2.35
L 19.38	2.17	2.39	L 25.23	1.68	1.96
L 20.32	2.17	2.39	L 23.46	1.40	1.72
L 20.69	1.84	2.09	L 20.95	1.18	1.55
L 17.88	1.54	1.84	L 9.70	1.59	1.88
L 14.92	1.31	1.65	L 11.51	1.75	2.02
L 5.15	1.80	2.06	L 11.98	1.82	2.07

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GROUND VISIBILITY PLOT - TABULAR DATA

RF-4C FRONT, ROLL 30 DEGREES LEFT

LEFT EYE			RIGHT EYE		
HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)	HORIZONTAL ANGLE (DEGREES)	GROUND DISTANCE (X ALT)	SLANT RANGE (X ALT)
L 6.45	1.97	2.21	L 12.10	1.93	2.17
L 6.88	2.09	2.32	L 10.58	2.13	2.35
L 2.22	3.22	3.37	L 7.65	2.65	2.83
L 3.49	4.66	4.76	L 8.81	3.44	3.58
L 4.54	4.81	4.92	L 8.37	4.76	4.86
L 4.07	5.53	5.62	L 8.95	5.20	5.30
L 5.37	6.08	6.17	L 13.69	7.32	7.39
L 6.36	6.92	6.99	L 15.15	11.08	11.13
L 7.22	7.71	7.78	L 12.26	HORIZON*	HORIZON*
L 9.30	10.71	10.76	L 10.78	21.04	21.07
L 10.78	21.04	21.07	L 9.30	10.71	10.76
L 12.26	HORIZON*	HORIZON*	L 5.30	6.11	6.19
L 6.81	115.97	115.97	L 1.62	7.93	8.00
L 5.52	18.00	18.03	R 2.71	12.21	12.25
L 3.94	12.24	12.28	R 5.92	20.24	20.26
L 3.07	9.35	9.41	R 7.50	29.75	29.77
L 2.23	7.56	7.62	R 5.80	HORIZON*	HORIZON*
R 2.71	12.21	12.25	R 11.10	17.74	17.77
R 7.85	33.26	33.28	R 12.70	13.48	13.52
R 10.43	HORIZON*	HORIZON*	R 14.42	10.08	10.13
R 10.74	HORIZON*	HORIZON*	R 16.01	7.54	7.61
R 16.50	HORIZON*	HORIZON*	R 20.59	7.56	7.63
R 18.24	50.31	50.32	R 25.82	8.04	8.11
R 20.97	11.98	12.02	R 28.23	8.01	8.07
R 24.54	12.12	12.16	R 29.01	7.19	7.26
R 29.77	13.09	13.13	R 30.13	5.94	6.02
R 32.85	12.03	12.07	R 32.22	6.26	6.34
R 34.60	7.84	7.90	R 36.98	6.86	6.93
R 44.01	11.26	11.31	R 39.16	7.12	7.19
R 41.77	66.43	96.44	R 36.72	19.92	19.94
R 52.58	33.70	33.71	R 46.85	14.73	14.76
R 49.91	14.61	14.65	R 49.91	14.61	14.65
R 54.18	22.65	22.68	R 54.07	25.85	25.87

*DEPRESSION ANGLE LESS THAN 0.54 DEGREES,
BUT NOT 0.00 DEGREES (TRUE HORIZON).

APPENDIX III

BASIC PORTION OF COMPUTER PROGRAM

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READ (5,2) N,D,PITCH,ROLL
2 FORMAT (15,3F5.0)
BETA = 90 - PITCH
DO 100 I=1,N
READ (5,101) ALPHA,PHI,KSIDE,KEYE
101 FORMAT (2F7.0,2I3)
FI = PHI
IF (ROLL.EQ.0.) GO TO 200
IF (KSIDF.EQ.1) PHI = -PHI
BETA = 90.-ROLL
RO = ROLL*PI/180.
GO TO 201
200 IF (KSIDF.EQ.1) PHI = 90. - PHI
IF (KSIDF.EQ.2) PHI = 90.+ PHI
IF (PHI.GT.180.) PHI = PHI - 360.
BETA = 90.-PITCH
RO = PITCH*PI/180.
201 A = ALPHA*PI/180.
B = BETA*PI/180.
P = PHI*PI/180.
ANGLE = SIGN(ABS(ATAN(SIN(RO)*SIN(P)/COS(RO))),RO*P)
105 IF (A+ANGLE.LT.0.) GO TO 100
ARG = COS(A)*SINT(P)*COST(B) + SINT(A)*SIN(B)
IF (KSIDF.EQ.2) K=1
IF (KSIDF.EQ.1) K=3
IF (KEYE.EQ.1) K = K + 1
LINE(K) = LINE(K)+1
J = LINE(K)
102 IR(J,K) = D/ARG
R(J,K) = FLOAT(IR(J,K))/6076.1
IC(J,K) = D*SQRT(1./ARG**2 - 1.)
C(J,K) = FLOAT(IC(J,K))/6076.1
103 VX = COS(A)*COS(P)
VY = COS(A)*SIN(P)*SIN(B) - SIN(A)*COS(B)
V(J,K) = ATAN(VX/VY)*180./PI
GD(J,K) = ALPHA+ANGLE*180./PI
AH(J,K) = FI
AD(J,K) = ALPHA
IF (ROLL.NE.0.) GO TO 205
IF (VY.LT.0.) V(J,K) = 180.-ABS(V(J,K))
V(J,K) = ABS(V(J,K))
GO TO 100
205 V(J,K) = 90. - SIGN(ABS(V(J,K)),VX)
100 CONTINUE
DO 400 K=1,4,2
KAPUT = K+1

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TZ980T

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DO 405 I=1,100
WRITE (6,FORM) (AH(I,J),AD(I,J),GH(I,J),GD(I,J),C(I,J),IC(I,J),
IR(I,J),IR(I,J),J=K,KAPUT)
405 CONTINUE
400 CONTINUE

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